
CHRISTS HOSPITAL SCHOOL SEAL

A

DESCRIPTIVE CATALOGUE

OF THE

PATHOLOGICAL MUSEUM

OF THE

Middlesex Hospital.

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MIDDLESEX HOSPITAL.

BY

J. KINGSTON FOWLER, M.A., M.D.,

Curator of the Museum, etc.;

ASSISTED BY

J. B. SUTTON, F.R.C.S.,

Assistant Curator of the Museum, etc.

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PREFACE.

THE Museum of the Middlesex Hospital, founded in 1835, consisted originally of preparations belonging to the various Lecturers in the Medical School, of whom Sir Charles Bell, Mr. Tuson, and Mr. Shaw, the joint Lecturers on Anatomy and Physiology, and Dr. Sweatman, who held the chair of Midwifery, were the chief contributors.*

On the death of Dr. Sweatman the whole of his collection, comprising many valuable specimens, was purchased by a separate fund raised for that purpose by the Hospital.

The Medical Committee in reference to this collection made the following report to the Weekly Board:—

> "The Committee are of opinion that the possession of Dr. Sweatman's Museum would be of essential benefit to the Medical School, and therefore directly subservient to the interests of the Hospital. That the price, three hundred and fifty guineas, at which it has been offered to the Hospital by the family of Dr. Sweatman, appears to be a very reasonable one.
>
> (Signed) "THOMAS WATSON, *Chairman.*"

A Special Committee was appointed to draw up regulations for the preservation of the preparations, and for the augmentation of the Collection.

The Report of this Committee is as follows:—

The Committee unanimously recommend the following rules:—

"That the Lecturers on Anatomy and Midwifery be requested to draw up and deposit in the Museum a Catalogue, and to number the different preparations according to it.

"That Mr. Lonsdale be requested to take charge of the preparations, and report to the Lecturers if any preparations be damaged or lost.

"That each Lecturer be responsible for any preparation broken or injured when it has been taken out of the Museum for his use.

"That no Lecturer take any preparation away from the School without leave from the Curator.

* *Vide* Sir Erasmus Wilson's History of the Middlesex Hospital.

"That any expenses incidental to the proper preservation of the late Dr. Sweatman's preparations, and the addition of new ones to the amount of twenty pounds annually, be paid by the Treasurer to the School upon application from the Museum Committee, consisting of the Anatomical, Medical, and Midwifery Lecturers.

(Signed) "J. NORTH, *Chairman.*"

In pursuance of the recommendation contained in the above report, Mr. Lonsdale was appointed Curator of the Museum in April, 1840. Mr. Lonsdale completed a catalogue of the preparations belonging to the Hospital, and resigned office in 1841. In the following year (February 8th, 1842) Mr. Rawdon, the successor of Mr. Lonsdale in the Anatomical department, was appointed Curator.

At a joint meeting of the Medical Officers of the Hospital and Lecturers of the School held December 11th, 1841, for the purpose of taking such measures as should be necessary for the maintenance and proper regulation of the Museum, it was determined:—

1. That a Museum Committee be appointed.
2. That the Committee shall consist of the Lecturer on Medicine, the Lecturer on Surgery, and one of the Lecturers on Anatomy.
3. That the Committee shall examine into the state of the Museum and Catalogue at least twice in the course of each year, and shall see that the preparations are properly preserved and in good order.
4. That the Committee shall give to the Curator hereafter to be appointed such instructions with regard to the management of the Museum as they may deem necessary for the purpose of carrying out its intended objects, subject to the authority of the Weekly Board.
5. That the Committee shall prepare a report of the state of the Museum, and shall present such report annually to the Weekly Board preceding the Quarterly Court in February.
6. That a Curator of the Museum shall be nominated annually by a Joint Committee consisting of the Medical Officers of the Hospital and Lecturers of the School, such nomination to be subject to the approbation of the Weekly Board.
7. That the election shall take place at a meeting to be held in the month of October of each year, the Committee being summoned at least one week previously.
8. That the Curator shall be eligible for re-election.
9. That the Curator shall receive an annual salary of twenty pounds.
10. That the Curator shall make and put up new preparations; that he shall re-prepare such as have become turbid, or have lost their spirit by evaporation, and that he shall repair such as have become injured; the mode of performance of these duties being subject to restrictions explained in the following clauses; and that the Curator shall be allowed such necessaries for the purpose of his

office as the Museum Committee shall think fit, these necessaries not exceeding the annual sum of ten pounds.

11. That the Curator shall be held responsible for the proper order, arrangement, and preservation of all the preparations belonging to the Hospital contained in the Museum, and that the entire Museum shall be considered to be under his charge.

12. That the Curator shall keep an exact register of the various preparations sent to the Museum by contributors for the purpose of being preserved, with brief notes of the nature and history of the case, and of the name of the contributor, in a registry-book to be kept for that purpose.

13. That the Curator shall submit all preparations which he may receive, with the book in which they are registered, to the Museum Committee as soon as possible after their receipt.

14. That no preparation shall be put up by the Curator until he shall have submitted such preparation to the examination of the Committee, and shall have received their approval.

15. That the Curator shall append a note to the designation of each preparation in the registry-book after the decision of the Committee, stating whether such preparation is received or rejected, and, if the latter, the grounds of its rejection.

16. That the Curator shall not re-mount or remove any preparations from their bottles without obtaining an order from the Committee, such order being registered in the common registry-book.

17. That the Curator shall make to the Committee at the end of every three months a report of the number of new preparations added to the Museum, the number of preparations re-mounted, and the present state of the Hospital collection.

18. That the Curator shall keep up the history of the Museum preserved in the Catalogue, recording the history or case of such preparations as may be from time to time added to the collection.

(Signed) FRANCIS HAWKINS, *Chairman.*

These Rules with some modifications are those now in force for the regulation of the Museum.

In 1845 the number of preparations belonging to the Hospital was 803, of which number 660 were the original nucleus of the collection purchased of Dr. Sweatman.

In 1847 a second Manuscript Catalogue was prepared by Mr. C. H. Moore, Lecturer on Anatomy, and afterwards Surgeon to the Hospital. Mr. Moore was succeeded in the Curatorship by Mr. Mitchell Henry, who presented many valuable specimens to the Museum. Upon Mr. Henry's resignation in 1851 the appointment was conferred upon Mr W. H. Flower, at that time a Student of the Hospital, who continued to hold it, except during an interval in which the duties were performed by Dr.

Philip Van der Byl, until 1861, when he resigned, on being appointed to the Curatorship of the Hunterian Museum. Mr. Flower was followed by Dr. Spencer Cobbold, who held the appointment until 1869. Dr. Cayley, who succeeded him, completed during his tenure of office a new Catalogue of the specimens which in this volume are included between Series V and XXX. In 1875 the offices of Curator of the Museum and Pathologist were conjoined, and Dr. Sidney Coupland was appointed, and fulfilled the duties until 1880.

The want of a printed Catalogue having long been felt, a special Committee was appointed to superintend its production, to whom the plans for the formation of the present volume have been submitted.

In the preparation of this Catalogue all the old descriptions have been revised and reduced to an uniform plan, the whole collection has been re-arranged and re-numbered consecutively throughout, and new descriptions been written of more than eight hundred specimens.

Every care has been taken to retain the references to publications found in the old Catalogues, and many original references have been inserted. Wherever possible cross references have been introduced in the case of specimens illustrating more than one pathological condition.

A new series of General Pathology has been formed, and a table of references to specimens in other parts of the Museum illustrating General Pathology has been appended to the table of contents of the Series of General Pathology at the commencement of the volume. In this and many other respects the plan of the Catalogues of the Museums of St. Bartholomew's Hospital and the Royal College of Surgeons has been closely followed.

With a view to render this Catalogue of more permanent value, and to obviate, or at least postpone the necessity for re-numbering, consequent on the addition of new specimens, the classification has been made as comprehensive as possible, and has not been limited to such morbid conditions as are illustrated by the present contents of the Museum.

It is hoped that the adoption of this plan, by directing attention to those departments in which the collection is defective, and forming in itself a list of *desiderata*, will lead to the supply of those deficiencies, not only from sources within the Hospital, but also from friends and former pupils of the Medical School.

J. KINGSTON FOWLER.

October, 1884.

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Printed slips arranged for insertion into interleaved copies of this volume will be issued annually, containing descriptions of the specimens added to the Museum during the preceding year.

These will be forwarded on application addressed to the Librarian at the Hospital.

SERIES I.

INJURIES AND DISEASES OF THE SKIN AND ITS APPENDAGES.

INJURIES.

EFFECTS OF BURNS AND SCALDS.

1. A Forearm and Hand, showing extreme contraction, the result of a severe burn. The elbow and wrist joints are flexed; the hand is slightly supinated; the tips of the fingers have disappeared, probably they are buried in the palm; the nail of the thumb is long and horny. The skin of the limb has ulcerated, and except about the hand, is almost completely destroyed. A section has been made through the preparation, but the parts have been reunited.

Vide Series XLII, No. 1.

OTHER INJURIES OF THE SKIN.

2. A Hand, the skin of which has been torn off, as if by a clean cut, just above the wrist, and drawn off from the hand and fingers as far as the last phalanges, to which it remains attached, and from which it hangs like an inverted glove. Several of the phalanges are considerably crushed. The hand has been amputated just above the wrist joint.

From a boy who whilst engaged in feeding a paper rolling machine had his hand caught between the rollers, which were sufficiently close to grip the skin, but not close enough to crush the hand.

Reported by Mr. George Lawson, *Path. Soc. Trans.*, vol. xxii, p. 346.

CONGENITAL ABNORMALITIES.

3.

HYPERTROPHIES.

4. Corns. A corn developed on the outer aspect of a little toe. The sac of a bursa was situated just beneath the thickened epidermis. A branch of the short saphena nerve is seen spreading out over the bursa.

ICTHYOSIS.

5.

HORNS.

6.

ELEPHANTIASIS.

7. A Foot affected with Elephantiasis. The posterior tibial nerve has been dissected from the leg, and is attached to the specimen; it is enormously enlarged. The enlargement is due chiefly to hypertrophy of the connective tissue of the nerve. In the same jar are the tibia and fibula; the latter bone is considerably enlarged, and at the lower end has been fractured obliquely: the fragments have united, but are overlapping. The outer malleolus is represented by a large oval articular surface, somewhat resembling one of the condyles of a femur; the corresponding articular surface of the os calcaneum is also large and roughened. The astragalus is wedged into a deep sulcus between the two bones. New bone has been formed at the margins of the articular surfaces. The ligaments of the ankle joints have been in great part destroyed, and the head of the astragalus moves freely from side to side.

From a man, aged 53, who was admitted for strangulated hernia, and died after herniotomy. The right leg from the knee was the seat of elephantiasis. The patient walked on the inner side of the foot, and to this the enlargement of the fibula is probably in great part due.

There was a perforating ulcer of the great toe of the opposite foot, and also some enlargement of the posterior tibial nerve on that side.

No history of the case could be obtained. Neither could the date of the fracture and of the onset of the elephantiasis be ascertained, nor whether the patient had suffered from locomotor ataxia.

ELEPHANTIASIS GRÆCORUM (Anæsthetic Leprosy).

8. The Left Foot, from a case of Anæsthetic Leprosy. The skin is of a brownish tint mottled with lighter coloured patches. Over the toes it is shrunken and wrinkled. The toe-nails have entirely disappeared.

From a man, aged 39, a native of Ireland, who contracted leprosy in Trinidad.
Reported by Mr. Arnott in *Path. Soc. Trans.*, vol. xix, p. 35.

KELOID.

9.

Vide Series XLII, Nos. 12 and 13.

MORPHŒA (Scleroderma.)

10.

PIGMENTARY CHANGES, NATURAL AND ARTIFICIAL.

11. A portion of Skin, from a case of Addison's disease, showing deep brownish-black pigmentation.

In the same jar are also the suprarenal capsules, seen in section. Their normal structure is completely destroyed; they are enlarged, but of an irregular shape; caseous nodules can be seen in each of them.

From a man, aged 24 years, who died in the Hospital, 17th April, 1864. He suffered for 9 months from pelvic abscess, due to disease of the left sacro-iliac synchondrosis. The constitutional symptoms of Addison's disease were well marked.
See *Path. Soc. Trans.*, vol. xv, p. 228.

Presented by Dr. Greenhow, F.R.S.

12. Two small pieces of Skin, of a deep brown tint, from a patient who was the subject of Addison's disease.

Presented by Dr. Greenhow, F.R.S.

Vide Series XXVI, Nos. 1651, 1654, 1655, 1656, 1658.

13. A portion of Skin into which there is tattooed in black and red a figure in Highland costume, holding a sword and shield. Beneath are the letters I. H. C.

14.

CUTANEOUS ERUPTIONS.

ECZEMA.

15.

EXANTHEMATA.

16. A portion of Skin showing the eruption of Typhus Fever, in the form of subcuticular mottling, and also several tumours of Molluscum, varying in size from a pin's head to a small cherry. Most of the smaller growths present a shrivelled appearance, and the cysts in their interior were empty.

From a female, aged 53, who died in the London Fever Hospital in March, 1863, from typhus fever. No particulars could be obtained as to the patient's history. The surface of the entire body was covered with molluscous growths.

See *Path. Soc. Trans.*, vol. xiv, p. 278.

Presented by Dr. Murchison, F.R.S.

17. Two portions of Skin, showing the pitting produced by the eruption of Small-pox. The cuticle has been removed from the lower specimen.

Presented by Dr. Goodfellow.

Vide Series XLII, Nos. 14, 15, 16, 17, 18, 19, 19A, 20.

ULCERS.

18. A portion of a Leg, showing a large oval ulcer of the integument situated near the lower end of the tibia. On the reverse side the bone is seen in longitudinal transverse section. The edges of the ulcer, and the base also to a slight extent, have been injected; the former are callous looking and undermined; the latter is formed by a material resembling coagulated lymph in appearance. On the lower end of the ulcer there is a sinus the size of a sixpence leading into the medullary canal of the subjacent bone. The bone is seen from behind on section to be greatly thickened, and the cancellous tissue converted into a caseous mass, which has in part undergone softening. The medullary canal contained pus and small sequestra.

19. A portion of a Leg, showing a large ulcer of the skin covering the greater part of the front of the limb. The surface of the ulcer has been deeply stained with carmine. At the upper part an islet of skin is seen, surrounded by granulations. The edges of the ulcer are level with its surface; the surrounding skin is partly composed of cicatricial tissue. The ulcer had been present for many years.

20. A Great Toe, showing a perforating ulcer extending from the plantar to the dorsal surface. A glass rod passes along the track of the ulcer through the phalangeal joint, emerging in the middle line about three-quarters of an inch behind the nail.

Presented by J. W. Hulke, Esq., F.R.S.

MORBID GROWTHS.

FIBROUS GROWTHS.

21.

PAPILLOMA.

22. A portion of the Integument of the back of a man, showing a warty excrescence.

Presented by G. Lawson, Esq.

LUPUS.

23. The lower part of the Fore-arm and Hand affected with lupus. The parts chiefly affected are the wrist, the dorsal surface of the hand, and both surfaces of some of the fingers. The diseased parts are ulcerated, and present a cicatricial worm-eaten appearance; the fingers, which are swollen and distorted, are covered with small warty looking granulations.

EPITHELIOMA AND OTHER MALIGNANT GROWTHS.

24. A Lower Lip, affected with epithelioma; almost the whole margin of the lip is involved in the growth.

From a man, aged 36.

25. A circular growth, the size of a walnut, having a deep ulcer in its centre, growing from the upper lip, and involving the alæ nasi. Microscopically the tumour presented the characters of epithelioma.

Removed from a woman, aged 36, by Mr. Shaw, 23rd May, 1861. The tumour had been growing eight weeks.

26. A Right Hand. On the dorsal surface near the metacarpo-phalangeal articulation of the index finger there is an oval ulcerated surface with sharply defined raised margin.

From a woman, aged 75. The disease had been 12 months in progress, and was attended by much pain and soreness. Removed by Mr. De Morgan.

27. A Right Hand, showing a large epitheliomatous ulcer situated on the dorsal surface of the index and middle fingers, and passing upwards along the edge of the thumb, and between it and the forefinger into the adjacent part of the palm. The edges are raised, and the infiltrated base is covered with prominent fungus granulations. Injected.

Removed from a man, aged 63, by Mr. C. De Morgan, April, 1861. The disease reeurred in the axillary glands, October, 1861.

28. A Left Hand, with a small part of the fore-arm, very extensively ulcerated and partly destroyed by an epithelial growth. Both palmar and dorsal surfaces show deep ulceration; the fingers are enlarged and deeply ulcerated.

29. A portion of the Right Leg of a man. The skin of the shin presents a large irregular outgrowth of epithelioma.

Removed by Mr. Nunn.

30. An oval raised Epithelioma growing from the surface of the skin of the leg.

Removed by Mr. De Morgan, 26th October, 1859.

31. A right Foot, showing a prominent epitheliomatous growth rather larger than a crown piece situated immediately below the external malleolus.

32. A left Foot, showing a large epithelial tumour with prominent cauliflower-like outgrowths, involving the skin corresponding to the dorsal and plantar surfaces of the two outer toes, with their metacarpal bones.

Removed from a woman, aged 69, by Mr. De Morgan. The patient died fourteen days after the operation.

33. The Skin of a portion of the Face with the left Eye. The site of the right eye is marked by a scar. Only the lower portion of the nose is present. A cancerous growth had been removed from the right orbit by operation and the application of caustics

The woman survived the operation three years. The disease did not recur. *See* Series V, Nos. 355 and 442.

34. The Nipple and a portion of a Mammary Gland, with the Skin immediately below it. In the latter there is a depressed cicatrix, from the centre of which the cuticle has been removed, whilst at the edges there are nodules of cancer.

35. A portion of Skin, showing a melanotic growth springing from the cutis.

MALIGNANT GROWTHS ORIGINATING IN CICATRICES.

36. A right Elbow, Forearm, and Hand, showing a large puckered cicatrix of the skin of the forearm, the result of a burn. Growing from the scarred integument of the flexor surface of the arm just below the elbow there is a large fungus mass of epithelioma, of oval shape, projecting some distance from its surface.

37. A portion of a Thigh, showing on its anterior surface a large epitheliomatous ulcer of the integument. The edges of the growth are raised and sinuous; the base is formed by prominent granulations, which have been stained by carmine. To the left of the specimen near the lower margin a white fibrous looking cicatrix of the neighbouring skin is seen; from this scar the growth originated.

Presented by George Lawson, Esq.

RODENT ULCER.

38. The anterior half of the Head of a Man, from whom the right superior maxilla and surrounding parts, including the right eyeball, were removed on account of rodent ulcer.

The patient lived several months after the operation.

Presented by C. Moore, Esq.

VASCULAR GROWTHS (Nævi).

39.

AINHUM.

40. A vertical section of the Little Toe of each Foot of a Negro affected with "Ainhum." In one a deep furrow is seen in the skin over the proximal interphalangeal joint, forming a nearly circular groove; in the other the disease is more advanced, the phalanges have separated, and are suspended in the upper part of the jar. The cicatrix left is small and healthy looking.

Ainhum (sig. to saw) is a disease of the little toe, leading to spontaneous amputation, affecting African negroes and their unmixed descendants born in the Brazils. The disease commences by the formation of a not quite semicircular furrow in the digito-plantar fold, occupying the internal and inferior portion of the root of the small toe; this furrow next encircles the toe, and gradually deepening, effects amputation, if the part be not previously removed. See *Path. Soc. Trans.*, vol. viii, p. 277.

41. Little Toe of a Negro affected with ainhum. The terminal phalanges have separated.

42. A Little Toe of a Negro affected with ainhum. There is a deep furrow encircling the middle phalanx, but amputation is not nearly complete.

DISEASES OF THE CUTANEOUS GLANDS.

SEBACEOUS CYSTS.

43. A Sebaceous Cyst removed from the scalp.

DERMOID CYSTS.

44.

45.

MOLLUSCUM CONTAGIOSUM.

46.

Vide No. 16.

PARASITIC DISEASES.

47.

DISEASES OF THE NAILS AND HAIR.

NAILS.

48. Two Great Toe Nails, which have become hypertrophied. They form two curved, horny cylinders, three and a half inches in length.

From an old lady who was bedridden from fracture of the neck of the femur.

49. Two Great Toes. The nails have been suffered to grow for a considerable time, and form long curved lamellated projections, thicker and denser than ordinary nails.

50. A Great Toe, the nail of which is enormously overgrown and twisted like a ram's horn.

From an old woman, aged 83.

Presented by J. B. Sutton, Esq.

ORYCHIA MALIGNIA.

51.

HAIR.

52.

53.

54.

SERIES II.

INJURIES AND DISEASES OF MUSCLES, TENDONS, AND BURSÆ.

INJURIES OF MUSCLES.

55.

56.

DISEASES OF MUSCLES.

FATTY DEGENERATION AND PSEUDO-HYPERTROPHY.

57.

OSSIFICATION.

58.

ABSCESS.

59. Portion of the Gluteus Maximus Muscle, with the skin covering it. An abscess cavity is situated in the cellular tissue overlying the muscle, which is exposed, but only superficially involved in the inflammatory process. In the cavity there is a white shreddy slough of the connective tissue.

From a case of pyæmia.

60.

SLOUGHING.

61. Portion of a Muscle, with the tissues about it sloughing; the muscle is itself partially affected.

TUMOURS OF.

62.

ENTOZOA.

63. A portion of a Muscle from the Leg of a Calf. Embedded in the tissue of the muscle are a number of cysticerci, of the variety "Cysticercus bovis." They appear as small white nodules, the size of swan shot, in the centre of which the parasite can be seen coiled up.

64. A portion of the Triceps and Adductor Cruris Muscle from a Calf, showing numerous measles (Cysticercus bovis) embedded in its substance.

Reared by the administration of the proglottides of Tænia-mediocanellata.

Presented by Dr. T. Spencer Cobbold, F.R.S.

65. An Œsophagus affected with trichina, removed from a dissecting-room subject. The fleshworms are seen to be limited to the pharyngeal or voluntary muscles.

Presented by Dr. R. Liveing.

TALIPES.

66. The left Leg and Foot of an infant in the position of talipes varus, with the tendons and muscles dissected. The inner border of the foot looks directly upwards, its outer border, and even the dorsum in part, downwards.

67. The inner part of a vertical section through the tibia, tarsus, metatarsus, and phalanges of the second toe of a left foot in a position of talipes equinus. The weight of the body in walking appears to have been borne by the great toe, which is extended at the metacarpo-phalangeal joint almost at a right angle to the altered axis of the foot. The second toe is flexed. The cancellous tissue of the bones has been superficially stained with carmine.

68.

Vide Series XLII, Nos. 43–49.

INJURIES OF TENDONS.

EVULSION.

69. A Thumb torn off by machinery, with the long flexor and extensor tendons attached.

70. A Finger torn off by machinery, with the tendons attached.

The patient, a child, was at work in a steam laundry, at a machine called an extractor, a large iron basket revolving at a great speed, filled with wet clothes, out of which the water is driven by centrifugal force. The child tied a tape round her finger and was amusing herself by hitting the spindle with it. The tape became entangled, and the finger was torn off, the tendons coming away with it.

Presented by John Wilton, Esq., of Sutton.

DISPLACEMENT.

71.

PROCESS OF REPAIR OF TENDONS AFTER SUBCUTANEOUS DIVISION.

72. A section of a portion of an Os Calcis and its Tendo-Achillis, which latter was divided by a tenotomy knife shortly before the patient's death. The divided ends are separated by a distance of nearly half an inch; they are coiled away from each other, and around them some blood has been effused; this has also spread some little distance up the tendon.

73.

DISEASES OF TENDONS.

DEPOSIT OF URATE OF SODA.

74.

TUMOURS.

75.

DISEASES OF THE SHEATHS OF TENDONS.

CHRONIC INFLAMMATION AND ITS RESULTS.

BODIES FOUND IN THE FLUID CONTAINED IN CHRONICALLY INFLAMED SHEATHS OF TENDONS AND GANGLIA.

76.

77.

GANGLION.

78. The lower end of a Radius. Attached to it is a ganglion which is not in direct connection with the sheath of any tendon.

Vide Series XLII, Nos. 51–52.

DISEASES OF FASCIÆ.

CONTRACTION OF THE PALMAR FASCIA.

79.

TUMOURS.

80. A Lobulated Fibrous Tumour the size of a small orange, which was attached to the transversalis fascia just above the groin behind the abdominal muscles.

The tumour was of four months growth. It was removed from a young woman by Mr. Hulke.

DISEASES OF BURSÆ.

CHRONIC INFLAMMATION AND ITS RESULTS.

Simple Enlargement with Collection of Serous Fluid in their Interior. (Bunion).

81. The Metatarso-phalangeal Joint of a Great Toe, attached to the inner side of which there is an enlarged bursa, consisting apparently of four loculi distended with serous fluid. The sac has been dissected, but not laid open. The articular cartilage of the metatarsal bone is seen to be partially destroyed by ulceration.

82. A left Great Toe dissected, showing an enlarged bursa upon the outer aspect of the metatarso-phalangeal joint. The head of the metatarsal bone is enlarged, and the phalanx is placed upon it at a right angle.

Presented by J. B. Sutton, Esq.

ENLARGEMENT WITH FIBROUS BANDS STRETCHING ACROSS THE INTERIOR.

83. A Bursa the size of an orange removed from the front of the patella. The bursa, which is laid open, is seen to consist in its upper part of dense solid fibrous material. In the lower part, between thick bands consisting of similar material, some spaces are left. The walls are enormously thickened and incorporated with the contents.

84. A Patella with the quadriceps tendon attached, showing an enlargement of the bursa patellæ, through which a fibrous cord passes transversely. This moves freely from side to side, and probably resulted from the insertion of a seton into the enlarged bursa with a view to its cure.

Presented by J. B. Sutton, Esq.

ENLARGEMENT WITH THICKENING OF THE WALLS.

85. A Patella with its ligament. The pre-patella bursa is enlarged, the walls thickened, and the interior filled with a solid growth; it also contained a thick glairy fluid.

From a dissecting-room subject.

86. Three Bursæ removed from the right patella and olecranon. The walls are enormously thickened, and the cavities almost obliterated by the formation within them of a dense fibrous substance.

87.

Vide Series XLII, Nos. 53, 54, 55.

SERIES III.

INJURIES OF BONES (FRACTURES).

VARIETIES OF FRACTURE.*

SIMPLE.

88. A portion of a Leg. A part of the skin has been dissected off and turned down to expose a recent simple and nearly transverse fracture of the shaft of the tibia. There is no displacement of the fragments.

Presented by J. B. Sutton, Esq.

COMPOUND.

89. Section of the upper part of a Tibia and Fibula, showing a compound impacted fracture of the tibia and a transverse fracture of the head of the fibula. The lower end of the upper fragment of the tibia, which is seen pointing forwards and downwards, projected through the skin. The lower fragment is firmly imbedded in the cancellous tissue of the head of the bone. There is osseous union, with angular displacement. The fragments of the fibula are united, with lateral displacement the lower fragment lying to the outer side.

TRANSVERSE.

90. Portions of a Tibia and Fibula. There is a transverse fracture of the tibia about three inches above the ankle. On the posterior aspect some comminution of the fragments has occurred. The fibula is not broken.

From a man, aged 70, who died six days after receiving a compound fracture of the left tibia, caused by a cab-wheel passing over his leg.

LONGITUDINAL.

91.

Vide Series XLIII, No. 3.

OBLIQUE.

92. A Tibia and Fibula, showing two oblique fractures of each bone. The tibia has been fractured through the external tuberosity, a portion of which is now missing. The line of fracture passes backwards and inwards toward the point of attachment of the posterior crucial ligament. There is also an oblique fracture of the shaft of the tibia an inch below the middle of the bone. Firm osseous union has taken place, with a considerable formation of new bone, and some lateral displacement of the fragments. The head of the fibula has been

* Other specimens illustrating the varieties of fracture will be found among Fractures of Particular Bones.

slightly displaced outwards, and is now firmly united to the tibia by bone. There are two oblique fractures of the shaft of the fibula, one three and a half inches from the upper end, the other two inches from the lower; both are firmly united. The lower and pointed extremity of the intermediate portion of the shaft is also united by a bridge of bone to the tibia.

93.

DENTATE.

94. Portions of a Tibia and Fibula, showing a dentate fracture of the tibia in the lower third. On the posterior aspect the lower fragment has been splintered. The fibula is fractured obliquely about an inch and a half above the ankle joint. The external malleolus is completely separated, and there is an incomplete fracture of the internal malleolus. Some thin laminæ of new bone have been formed about the fractures, but no union has taken place.

FISSURED.

95. The upper half of a Femur, showing a fissured fracture extending along the centre of the shaft for a distance of four inches.

96. A wedge-shaped piece of a Parietal Bone, showing a fissured fracture extending from the apex toward the base. There is also a valvular slit in the bone about half an inch long, extending through its whole thickness, though only just visible in the inner table. Into this slit some hair has been forced.

The injury was caused by the patient slipping and falling upon the pavement.

SPIRAL OR HELICOIDAL.

97. A Tibia and Fibula, showing a spiral fracture of the former extending downwards to the posterior aspect of the lower tibio-fibular articulation, and also a fissured fracture on the outer surface of the lower fragment. There is an oblique fracture of the fibula just below the head of the bone.

SPLINTERED.

98.

COMMINUTED.

99. Portion of a Femur, fractured in its lower part. The fracture extends in several directions through the lower third of the shaft a little above the condyles, and downwards between the condyles into the knee joint. Several small portions of bone have been completely detached.

100. A comminuted fracture of the Tibia and transverse fracture of the Fibula in the lower third, the former fracture extending into the ankle joint. Some small portions of the lower fragment of the tibia are wanting. The ends of the fibula are overlapping to the extent of one inch, and from the arrangement of thin laminæ of new bone about the fracture, it is evident that there was partial union in this position. New bone has also been formed on the surface of the tibia above and below the point of fracture.

101.

IMPACTED.

102. Section of the lower part of a Tibia and Fibula, showing an impacted and comminuted fracture of the tibia and fractures of the fibula just above the ankle joint. Fragments of the outer compact tissue of the tibia have been

driven into the cancellous tissue of the articular end. The fractures extend into the joint, and the tip of the outer malleolus is broken off.

From a woman, aged 50, who died in the Hospital 12th November, 1859, of pneumonia and delirium tremens, twenty-four days after the receipt of the injury, the result of a fall down a flight of steps.

Surg. Reg., 1859, No. 364.

103.

DEPRESSED.

104. The roof of a Skull, showing a depressed fracture principally of the left parietal bone near the posterior superior angle, but extending also across the sagittal suture, and affecting the parietal bone. The depressed area is oval externally, and measures one and seven-eighths of an inch by one and one-eighth. Viewed from within it is almost quadrilateral, and measures two inches by one and a half. The five depressed pieces which surround the opening project inwards with a sharp edge toward the dura mater. The external table is completely fractured in each fragment, whilst the fracture of the internal table is in all but one case incomplete.

Presented by George Lawson, Esq.

105.

PUNCTURED.

106. The upper wall of a Right Orbit, showing a punctured fracture. Perforating the roof close to the inner angle is a piece of slate pencil, two and a half inches in length. Two inches of it projected through into the cranial cavity, and penetrated the frontal lobe, where an abscess formed. The pencil is lying at the bottom of the bottle.

From a girl, aged 6, who survived the accident seven days. The pencil was broken off nearly level with the outer table of the skull. The house surgeon grasped it with a forceps and attempted to remove it, but it was firmly impacted and crumbled down when seized. Mr. Hulke on the following day gouged away the surrounding bone, and removed some small portions, which were thought to be all that remained.

Presented by J. W. Hulke, Esq., F.R.S.

107.

STELLATE FRACTURE.

108. A Skull Cap, showing an extensive starred and comminuted fracture of the posterior half of the left parietal bone and adjacent portion of the occipital. Four lines of fracture radiate from a single centre forming four triangular fragments, one of which is still further comminuted. The fragments are bounded by a very regular oval line, which in the outer table is sharply cut, but in the inner slopes off to a thin edge.

MULTIPLE.

109. A Tibia and Fibula. The tibia shows recent extensive comminuted fracture of the lower third of the shaft. There are two fractures of the fibula, one two inches below the head, the other comminuted, near the centre of the shaft.

SPONTANEOUS.

110. The Shaft of a Femur, removed by amputation. The bone passes through the centre of a large oval cavity the size of a fœtal head, apparently formed by the expanded periosteum. In the recent state this was filled up by the soft matter of encephaloid cancer. The femur itself is denuded, rough, and presents an irregular oblique fracture. Projecting inwards from the wall of the cavity are rods and laminæ of osseous tissue.

GUNSHOT FRACTURES.

111. A Skull, showing the apertures of ingress and egress of a bullet which passed through it from before backwards. The aperture of ingress, five-eighths of an inch in diameter, round, with a sharp cut edge, is situated nearly midway between the frontal eminences; that of egress, three-quarters of an inch in diameter, near the posterior superior angle of the right parietal bone, is irregular in outline, and its edge is broken away externally. Two fractures are seen passing off from the aperture of ingress, one directly upwards, the other outwards and then downwards through the orbital plate into the ethmoid, and thence through the body of the sphenoid into the temporal bone. A fissured fracture of the right parietal bone passes upwards from the aperture of exit.

From Alexandria.

112. The Atlas and Axis Vertebræ, showing a complete transverse fracture through the base of the odontoid process of the latter, produced by a bullet which had passed from behind completely through the spinal cord. The bullet is fixed by a wire in the place where it was found.

Taken from a man named Latham, who was shot by Burinelli, 1855.

113. A Lower Jaw, showing numerous small shot embedded near the symphysis. New bone has been deposited around most of them.

114. A Skull Cap, showing the aperture of entrance of a bullet near to the centre of the squamo-parietal suture. The fracture of the inner table is larger than that of the outer. The trephine has been applied just below the fracture.

Presented by George Lawson, Esq.

SEPARATION OF EPIPHYSES.

115. The lower end of the Tibia and Fibula with the Os Calcis and Astragalus, showing a separation of the lower epiphysis of the fibula, and rupture of the internal lateral ligament of the ankle joint and the ligaments of the inferior tibio-fibular articulation.

Presented by J. B. Sutton, Esq.

Vide Series XLII, No. 93.

116.

FRACTURES COMPLICATED BY INJURIES OF OTHER PARTS.

117. The lower end of a Femur and upper end of the Tibia and Fibula, showing the fracture of the external tuberosity of the tibia, extending from before backwards, and separating that portion of the bone from the shaft. Posteriorly the fragments are comminuted, and the portion of bone supporting the head of the fibula is broken off, and the superior tibio-fibular articulation opened. The external semilunar cartilage is dislocated from its attachment, but not torn. The internal semilunar cartilage is also separated from the bone in almost its entire length, and is much diminished in size, hanging as a loose strip. The edge of the internal tuberosity is bare of periosteum and eroded. The portion of the tibia to which the posterior crucial ligament is attached is held to the bone by periosteum only. The internal lateral ligament is ruptured; the external ligaments are complete. There is extensive ulceration of the articular cartilage of the femur.

For history of the case, *see* No. 319.

118.

PROCESS OF REPAIR OF FRACTURES.

SEPCIMENS ILLUSTRATING THE MODE OF REPAIR OF FRACTURES IN ANIMALS.

119. A Tibia and Fibula of a monkey. Both bones have been fractured in the upper part of their shafts, and have united, considerable angular deformity resulting. A section of the tibia at the site of fracture shows that the fragments are in apposition, and their ends surrounded by a soft ensheathing provisional callus. An interior callus is in process of formation.

Presented by J. B. Sutton, Esq.

120. A Right Femur of a monkey, showing a fracture in the lower third which has failed to unite. The same jar contains the skull of the animal, showing extensive fracture with comminution of the fragments. The monkey lived in the Zoological Gardens, Regent's Park. Whilst leaping across the cage it fell head foremost to the ground, and died immediately.

Presented by J. B. Sutton, Esq.

121.

122.

REPARATIVE MATERIAL (PROVISIONAL CALLUS), RECENT AND SOFT.

123.

REPARATIVE MATERIAL, FIRM, FIBROUS, OR CARTILAGINOUS.

124. The outer half of a longitudinal section of part of a Femur which has been fractured in the upper third and in the middle of its shaft. The upper fracture was old, the lower happened sixty days before death. The line of the upper fracture is transverse; that of the lower oblique from before downwards and backwards. The periosteum, much thickened, has been partly stripped off. Around the ends of the lower fracture a new tissue has been formed (external provisional callus), and is becoming ossified. Between the fractured sides is a layer of dense white fibrous looking tissue (internal provisional callus); this has not undergone ossification. The medullary canal is not restored. Firm osseous union has occurred between the upper fragments, with angular displacement, the upper fragment lying in front of the lower. The projecting end of the upper fragment is smooth and rounded off.

From G. Wilkinson, who was admitted 23rd December, 1842, under Mr. Shaw, and died of acute bronchitis 21st February, 1843.

125.

126. Section of a portion of the shaft of a Femur which has been fractured nearly transversely; one fragment overrides the other, and a considerable deposit of ensheathing callus has formed around the fractured ends; this is undergoing ossification, the process being complete in all parts except in the light-coloured bands of fibrous material still seen around the fractured ends. Small arteries could be traced in the callus similar to those passing from the periosteum into the Haversian canals.

REPARATIVE MATERIAL OSSIFIED.

127. Section of the lower end of a left Tibia of a child, which has been fractured transversely about one and a half inch above the ankle, and the upper fragment driven into the cancellous structure of the lower one. The lower fragment with the epiphysis is split longitudinally into the joint, and

the epiphysis itself detached. There is a considerable deposit of new bone round the upper transverse fracture investing the upper fragment for more than an inch. Bony union is also in progress between the fragments of the longitudinal fracture. The fracture had existed six weeks.

FORMATION OF DEFINITIVE CALLUS.

128.

FORMATION OF ENSHEATHING CALLUS.

129. A Clavicle which has been fractured about its middle. Osseous union has taken place, the fragments slightly overlapping. The new bone ensheaths the fractured end.

130. A vertical section of a Femur fractured about the centre of its shaft. Union has taken place, with excessive formation of new bone, around the fractured ends, which are overlapping for about four and a half inches, the upper lying in front of the lower. On the posterior surface the new bone is marked by oblique ridges and spiculæ in lines showing the site of muscular attachments. The outer compact layer of the upper fragment is much thickened. The section shows that the medullary canal has not been completely re-established. Much new bone has been formed upon the condyles at the point of osseous and cartilaginous junction, probably the result of chronic rheumatoid arthritis.

131.

FORMATION OF INTERMEDIATE CALLUS.

132. A longitudinal section of a portion of the shaft of a Femur, showing an oblique fracture. The fragments are overlapping for about three inches, the lower lying behind the upper, and being united to its posterior surface by a layer of bone nearly an inch in thickness, dense externally but spongy within, which joins the surfaces but not the ends of the fragments. The end of the upper fragment is smooth and rounded, that of the lower is pointed. The medullary canal is not re-established. A ridge is seen on the outer aspect of the uniting bone.

From a man, aged 56, who died in the Hospital 29th November, 1856. *Med. Reg.*, vol. iii, No. 391.

133. The lower half of a Tibia and Fibula, fractured about two and a half inches above the ankle joint. Union has taken place, with considerable displacement of the lower fragments backwards and outwards. The tibia has united by a bridge of bone passing obliquely between the fragments, which are not in apposition.

REPAIR OF COMPOUND FRACTURES.

134.

135.

REPAIR AFTER TREPHINING.

136. Portion of a Frontal Bone, to which the trephine has been applied. The centre point of the instrument has perforated both tables, but the crown has only divided the outer table and diploe. A considerable formation of porous new bone has taken place around the edges of the circle and for some distance beyond in a forward direction. A piece of the outer table close by has undergone superficial necrosis, the necrosed part still remaining attached. New bone has also been deposited on the inner table beneath the part trephined.

137.

FRACTURES UNITED WITH DEFORMITY.

WITH VERTICAL DISPLACEMENT.

138. A Femur, fractured at the junction of the middle with the lower third of its shaft. The two portions overlap to the extent of two and a half inches; the lower portion lying in front of the upper. They are firmly united by bone. The displacement has caused considerable inward rotation of the condyles.

139. A Tibia and Fibula. The tibia has been fractured obliquely about three inches above the ankle joint, the two portions overlap each other laterally, the lower lying to the outer side of the upper. The fragments are firmly united in the middle by bone, the extremity of each forming a sharp projection. The fibula has been fractured about an inch from its head. Union has taken place at a very obtuse angle.

140.

141.

WITH ROTATION.

142. A Femur, fractured in the middle of its shaft. The fragments are firmly united, but with such a degree of external rotation of the lower fragment that the condyles look almost directly inwards. The internal surface of the lower fragment is in contact with the posterior surface of the upper, to which it is united by dense bone.

143.

WITH ANGULAR DISPLACEMENT.

144. A Femur, fractured at the junction of the upper and middle third, and also in the lower third of the shaft, the intervening portion being split vertically into two parts. Union has taken place at an angle, with projection forward of the upper fragment, which, like the lowest fragment, is prolonged into a sharp point. The posterior of the two middle fragments forms a bridge between the upper and lower parts of the bone, leaving two intervals between it and that portion of the shaft to which it originally belonged, and to which it is firmly united.

145. A Femur, fractured near the middle of the shaft. Union has occurred at an angle, which is directed forwards. The fragments, which overlap for two and a half inches, the upper being in front, are united by new bone thrown out between them.

146. A Femur, fractured near its middle. Firm union has taken place at an angle, which is directed outwards. The upper fragment, which is prolonged into a fine point, projects forwards. There is marked increase of the lateral curve of the bone.

UNION, WITH SEPARATION OF THE FRAGMENTS.

147. A Tibia and Fibula, fractured through the middle of their shafts. The fibula, which is fractured obliquely, and splintered, has united with some overlapping of the fragments. A large amount of cancellous new bone has been formed on both fragments of the tibia. They are not in contact, but are united on the posterior aspect by two bridges of bone, and a third which has been broken. A large superficial nutrient canal is seen on the posterior surface of the upper fragment of the tibia.

148.

WITH EXCESSIVE FORMATION OF CALLUS AND THICKENING OF THE BONE.

149. A Femur, fractured in the upper part of its shaft. The fragments have united almost at a right angle. A large mass of spongy bone, portions of which have subsequently undergone necrosis, has been formed around them. The necrosed parts have separated in the process of maceration, leaving three cup-shaped depressions. The lower fragment for a length of eight inches is much thickened, dense, and presents a finely worm-eaten appearance. Similar changes are seen in the part of the upper fragment adjacent to the fracture.

150. The upper part of a Right Femur, which has been been fractured at the base of the neck along the inter-trochanteric line. Another fracture runs from the middle of the upper border of the great trochanter downwards and backwards to an inch and a half below the lesser trochanter, nearly parallel to the posterior inter-trochanteric line. The greater part of the trochanters is thus broken off in one long piece. The shaft of the femur is driven about one and a half inches upwards, and is rotated outwards, so that the linea aspera looks inwards. The psoas and iliacus muscles appear to have drawn the lower end of the fragment, including the trochanters, forwards, and to have also tilted forward the lower part of the base of the neck. In this situation the fragments are firmly bound to each other and to the shaft by a considerable deposit of new bone.

151. Section of a portion of the shaft of a Femur through the seat of a fracture. Union has taken place with lateral displacement, the bones overlapping for an inch and a half. An excessive quantity of new bone has been formed, smooth and dense externally but spongy within. This it perforated in numerous places for vessels. The end of the upper fragment is smooth and rounded, that of the lower is partly uncovered, the medullary canal being exposed, and around it many spiculæ and bridges of new bone have been formed.

FAILURE OF THE PROCESS OF OSSEOUS UNION.

UNION BY FIBROUS TISSUE.

152. A section of the upper part of a Femur, fractured through the base of the neck just within the capsule. The portion of the neck which was connected with the shaft is nearly absorbed; the portion connected with the head remains, and rests in a cavity in the cancellous tissue of the trochanters. A thin fibrous band at the upper margin unites the great trochanter to the upper fragment. The head of the bone is resting on the trochanter minor.

From a woman, aged 94, who sustained a fracture of the cervix femoris eight years before her death. The patient was unable to walk after the accident.

Presented by Dr. Arthur Cribb.

For the corresponding section, see under Fractures of Particular Bones (No. 250.)

153. A Patella, which has been fractured across the lower third. The fragments are half-an-inch apart, and united by a thick ligamentous band. There is no bony union, and no production of new bone. The lower fragment presents a rough surface posteriorly, where it had become united to the tibia.

154. A portion of a Femur, which has been fractured in the upper part of the shaft. The upper fragment is tilted slightly forwards, and is lying in front of the lower. The fragments are held in position by a capsule of fibrous tissue, but there is no bony union, although small nodular masses of new bone are seen in the fibrous capsule. The ends of the fragments are uncovered by periosteum, and are undergoing necrosis.

155. A Femur, fractured in the upper part of its shaft. The fractured surfaces are not in contact, but are covered with new bone, which partly unites them, but the principal uniting medium is a capsule of fibrous tissue.

FRACTURES WHICH HAVE REMAINED LONG UNUNITED.

156. A section of the lower end of a Femur, which has been fractured about three inches above the condyles. The upper fragment is resting on the anterior surface of the lower, which is displaced backwards. There is no bony union, but the fragments are surrounded by dense fibrous tissue, passing from one to the other, but not between the fractured surfaces. This is becoming transformed into cancellated bone. A considerable deposit of finely porous bone has been formed on the surface of both fragments, and to a less extent within the medullary canal. The condyles are extensively excavated.

157. A Tibia and Fibula. The tibia has been fractured about its centre, the fragments have not united by bone, they are now separated by a distance of half-an-inch and held in place by a fibrous capsule forming a false joint. Through an opening in the capsule the ends are seen to be smooth and to have been moulded by contact. The fragments are atrophied in the neighbourhood of the fracture. The fibula shows great compensatory hypertrophy, and has evidently acted as a splint for the fractured tibia. The superior tibio-fibular articulation is enlarged by a formation of new bone around its edges. Probably an unusual amount of movement took place at this joint in consequence of the fracture of the tibia.

From a man, aged 67, a dissecting-room subject. The fracture had existed for ten years. The patient was in the habit of binding the bones together with pasteboard splints covered with a bandage, and wedging the apparatus tight by forcing pieces of wood between the splint and bandage.

He was the subject of syphilis, the date of infection long preceding the fracture. He died from cerebral hæmorrhage.

See specimens Nos. 496, Ulcerated Skull; 355, Cleft in Hard Palate; 1699, Penis; 1633, Axillary Glands.

Presented by J. B. Sutton, Esq.

158.

UNUNITED FRACTURES ON WHICH AN OPERATION FOR REPAIR HAS BEEN PERFORMED.

159. A portion of the shaft of a Femur, forming the end of the lower fragment of a fracture. An ivory peg is inserted horizontally into the bone immediately below the fractured surface, which has been sawn off and turned back so as to show the position of the peg, which nearly transfixes the bone. The whole thickness of the femur is seen to be converted into dense ivory-like compact tissue, and that part of the peg contained in the bone is superficially eroded. The surface of the fracture is covered with a layer of very porous new bone.

The patient was a middle-aged man, the captain of a whaler, who met with the fracture in the South Seas; there was no surgeon on board, but the leg was put in splints. Several months afterwards he was admitted into King's College Hospital, under Sir William Fergusson, with the fracture ununited. Sir William Fergusson rubbed the bones forcibly together, subsequently scarified them subcutaneously, and afterwards inserted the peg. These proceedings not being followed by bony union, the leg was amputated. Secondary hæmorrhage took place after the flaps had partially united, for which Mr. Hulke tied the superficial femoral artery. An aneurism formed at the seat of deligation, and the patient died some months after the operation.

Presented by J. W. Hulke, Esq., F.R.S.

FALSE JOINTS.

160. The bones of an Elbow Joint, showing changes probably the result of an old fracture of the external condyle of the humerus. The ridge leading to the external condyle is rough from a formation of new bone, and the head of the

radius, somewhat enlarged, is resting upon a smooth surface forming a false joint in front of the ridge. New bone has been formed at the edges of the articular surfaces of the humerus and ulna, and the latter bone is tilted upwards and outwards.

161. The bones of an Elbow Joint. New bone has been formed at the edge of the articular surfaces, which are irregular and denuded. The head of the radius is displaced upwards and outwards, and is articulating by its inner surface only with the external condyle, and slightly with the ulna. The neck of the radius is bent towards the ulna, and at the bicipital tuberosity the bones are in contact.

162. The lower half of a Right Femur, with the tibia and fibula and the foot. There is a fracture of the tibia, the result of an injury several years before. Union has not occurred. A false joint has been formed, and the fibula has become so much incurved towards its middle and lower parts as to be in close apposition with the tibia, and to afford it considerable lateral support. The internal and external condyles of the femur are enlarged and mis-shapen, the enlargement being entirely cartilaginous. There is a large additamentary mass of cartilage growing from the lower and inner sides of the external condyle. The patella faced almost outwards, and is mis-shapen on its articular surface. Beneath the cartilage of the patella, and also beneath that of the trochlea surface of the femur, the bone is soft and like splenic pulp. The external lateral ligament is contracted and tense; the internal elongated and, except during distension, not tense; extension was limited to 140°; the other movements of the joint were not interfered with; passive lateral movement was very free.

From a boy, aged 18, whose leg was amputated because the condition of the knee prevented him from walking or standing; he recovered. Reported in *Path. Soc. Trans.*, vol. xxxii, p. 160.

Presented by Henry Morris, Esq.

163. A left Os Innominatum. The acetabulum is normal in its upper and anterior part, posteriorly it is filled up by a large boss of bone which has been deposited on the cotyloid ridge. A broad mass of new bone has also been deposited above the acetabulum upon the dorsum ilii, and being much thicker at the circumference than in the centre, forms a new articulating cavity in which the dislocated head of the femur might move.

DEVIATION FROM THE ORDINARY PROCESS OF REPAIR FROM NECROSIS.

164. The lower end of a Femur and the head of the Tibia. There is a comminuted fracture of the femur a little above the knee joint; a piece detached from the upper fragment is impacted in the lower one, which is split longitudinally into the knee joint. The impacted piece, and the end of the upper fragment and portion of the surface of the lower are necrosed. Some new bone has been formed in the neighbourhood of the fracture.

The injury was caused by the patient falling from a height of about fifty feet. The fracture was compound. Amputation was performed between three and four months after the accident. The patient made a good recovery.

Presented by George Lawson, Esq.

165. A Patella, which has been fractured transversely. The upper fragment, which has undergone necrosis, is covered on the anterior surface with irregular spiculated masses of new bone. New bone has also been formed on the lower fragment. There is no union.

166.

FRACTURES OF PARTICULAR BONES.

FRACTURES OF THE BONES OF THE SKULL AND FACE.

SKULL.

167. Portion of a Frontal Bone. The anterior walls of the frontal sinuses are broken away, and a longitudinal fissure extends from the left half of the bone upwards through both tables nearly to the coronal suture. The trephine has been applied in the course of this fissure.

168. A portion of a Frontal Bone, showing a depressed and comminuted fracture of the supra-orbital ridge and roof of the orbit, and a fracture of the corresponding portion of the inner table of the skull.

169. A Skull Cap, showing a very extensive comminuted fracture of the frontal bone, the lines of fracture extending as fissures into both parietal bones, portions of the outer tables of which are slightly depressed. The fractures in the two tables exactly correspond.

From a boy, aged 7 years. The fracture was compound.

170. A Skull Cap, in which the frontal and parietal bones are broken into numerous fragments by fractures which run in various directions. The internal table is fissured in some places where the external table has not yielded. There is no depression.

From a boy who fell from a considerable height upon his head.

171. Skull Cap of a young person, in whom fracture of the left parietal bone occurred a considerable time before death. There is an aperture about the middle of the bone an inch long and a quarter of an inch broad; externally the margins are shelving, internally, though rounded, they are more abrupt. From the upper angle a fissure curves inwards to the sagittal suture, while from the lower angle another passes to the coronal suture. Both these fissures are distinct externally, while on the inner table they are but just discernible. They are completely united by bone. A thin layer of new bone, darker and more porous than the original bone, lines the interior of the calvaria for a considerable distance around the fracture, where also the bone is slightly thickened.

From Mr. Shaw's Collection.

172. A Skull, exhibiting an incised wound in the parietal bone close to and slightly in advance of the parietal eminence. The wound is one inch long by three-eighths of an inch in width, and presents an irregular margin. A small tongue of the inner table, a quarter of an inch in length, projects from the back of the wound. From the anterior and posterior angles of the wound proceed fissured fractures in the outer table. There is also a fracture through the articulation of the wing of the sphenoid and squamous portion of the temporal bone on the right side. The zygoma is also fractured.

From the shores of Aboukir Bay.

173. A Skull, showing an incised wound about the centre of the right parietal, reaching forwards and upwards as far as the coronal suture. A portion of the entire thickness of the skull has been sliced off. The wound in the outer table is two and a quarter inches in length, in the inner table, one and a quarter inches. The upper margin is bevelled off.

From the shores of Aboukir Bay.

174. Skull of an adult, exhibiting three incised wounds on the vertex, by which portions of the left parietal and occipital bones have been sliced off, and a fourth at the anterior inferior angle of the right parietal and frontal bones. A vertical fracture extends through the frontal bone and vomer just on the left of the middle line to the base of the nose, thence through the left superior maxilla. There is a considerable portion of the right side of the skull missing about the posterior inferior angle of the parietal bone, from which point a fracture extends upwards to the vertex.

From the shores of Aboukir Bay.

175. Upper portion of the Skull of a child, with a linear fracture of the right parietal bone running from about the centre of the bone to the inter-parietal suture. The bones on the right side appear to be much thinner than on the left, and there are several areas in the right parietal bones where neither bone nor membrane is seen.

The birth was illegitimate and concealed, and it was stated by the mother that the child was killed by falling on the floor in the act of birth. At the trial this defence was admitted, and the woman was acquitted, as the medical evidence tended to show that if a blow had been struck the fracture would have been scintillated and depressed.

Presented by Dr. Priestley.

176. Skull Cap, showing a fracture of the left parietal bone, extending from the anterior inferior to close to the posterior superior angle of the bone. This latter is comminuted by a fracture which meets the first at right angles and separates the angle from the rest of the bone. There is also a fissure in the occipital bone.

177. Portion of a Skull Cap, showing a depressed fracture of the right parietal bone. The corresponding portion of the inner table has been completely separated. The trephine has been applied close to the spot. There is no mark of any reparatory process in the injured part.

178. A Skull Cap, showing an extensive comminuted fracture of the posterior half of the right parietal bone, with a fissured fracture extending in a curved direction across the vertex to the corresponding part of the left parietal, where it meets with another fracture running in antero-posterior direction to the lambdoidal suture. A fragment of the posterior superior angle of right parietal bone is missing.

179. Portion of a left Parietal Bone, to which the trephine has been twice applied. A small fragment of the outer table is depressed.

180. A Skull Cap, exhibiting a separation of the left half of the lambdoid suture and several fissured fractures of the parietal bones. The trephine has been applied over the junction of the sagittal and lambdoid sutures, and therefore over the longitudinal sinus, and a portion of both tables removed.

181. Skull Cap of a child. The parietal bones have been extensively comminuted. There is also a fissured fracture of the left half of the frontal bone; the line of fracture runs through the coronal suture.

182. A Skull Cap, showing extensive comminuted fractures of the parietal and frontal bones. The principal line of fracture extends from side to side, and nearly in the line of the coronal suture. On the right side the trephine has been applied to the frontal bone, portions of which are wanting at this spot. A fragment of the right parietal bone at the edge of one of the fractures is slightly depressed, and the corresponding portion of the inner table completely separated.

183. Skull of an adult, showing a depressed fracture of the lower part of the right parietal bone in process of repair. The saw in removal of the calvaria has passed through the fracture, and the lower fragments are wanting. There remains a lozenge-shaped depression one and a half inch by five-eighths of an inch between the anterior and upper part of the squamosal and the inferior angle of the parietal bone. The upper part of this is filled by a triangular plate of depressed bone, three-quarters of an inch wide, which can be felt projecting within the skull. From this a fissure runs up in the middle table for a distance of three inches, and below another fissure passes through the centre of the squamosal, nearly to the root of the zygoma. The margins of the outer table are rounded, and union has taken place in two or three points between the divided halves of the squamosal.

184. Portion of a Parietal Bone, showing a comminuted and depressed fracture. The fragments are partially united together by fibrous tissue.

185. Skull Cap, showing a depressed fracture of the squamous portion of the right temporal bone, which has completely united. The outline of the fracture can still be easily defined. Externally the edges are smooth and rounded; on the inner table there is some rough new bone at the anterior extremity of the fracture, which at this point extended through both tables.

186. A Calvaria, showing a comminuted stellate and circular fracture of the left parietal bone, near the posterior inferior angle, extending into adjacent parts of the temporal and occipital bones. The stellate fracture radiates from the centre of the, roughly speaking, circular one, dividing the included bone into four triangular fragments, nearly equal in size. Two of the principal lines of fracture are continued into the squamous portion of the temporal bone, to which the trephine has been applied; a third is prolonged into the occipital. Viewed from within, the edges of the circular fracture are seen to shade off more gradually into the inner table, while in the outer table they are abrupt. The fragments were probably depressed.

187. A portion of a Temporal Bone, showing an extensive comminuted fracture of the petrous portion, laying open the tympanic cavity.

188.

189.

190. The posterior half of the Skull of an adult. There is a longitudinal fracture through the left side of the occipital bone, reaching from the framen magnum to the lambdoidal suture. In various parts of the occipital and parietal bones adjoining there are numerous islets of necrosis of the outer table more or less separated. Many of these are in the course of the sutures, but others are quite distinct. Viewed from within, the left side of the occipital bone is seen to be worm-eaten and perforated, particularly in the fossa above the groove for the left lateral sinus.

191. Portions of Bone forming the base of the anterior fossa of a skull, showing a linear fracture along each side of the cribriform plate of the ethmoid, extending into the body of the sphenoid. On the right side the optic nerve is torn across where the fracture traverses its course. The torn end of the nerve is shreddy. On the left side the fracture extends into the orbit, where it communicates with an abscess in the side of the lachrymal sac. The lachrymal bone is extensively fractured.

192. The Skull of a young subject, exhibiting a fracture which, commencing at the left temporal ridge, and being continued in the course of the front parietal suture which it separates, passes through the base and divides the skull into two parts. About the left temporal ridge there has been an extensive fracture of the frontal and parietal bones, for which trephining has been performed, and portions of bone have been removed by the saw. There is a fracture through the orbital plate of the frontal and the squamous portion of the temporal bone on both sides. On the right side the latter fracture extends into the glenoid fossa. There is a separation between the comminuted sphenoid and the basilar process.

193. Skull of an old woman, with the lower jaw attached. There is a fracture across the sella turcica extending through either temporal fossa. Another fracture begins at the foramen magnum, and passes outward, through the petrous portion of the left temporal bone at the tympanum. Another passes through the right half of the occipital bone upwards to the lambdoid suture, and thence into the posterior superior angle of the right parietal bone.

194. Skull of an adult, from which a portion of the frontal bone is missing. The line of separation of the missing portion is rough and irregular, as though it were the result of a fracture. There are fissured fractures of the right temporal and parietal bones, and the left parietal and occipital. The fracture of the latter extends through the left condyle into the foramen magnum. There is also a separate depressed fracture of the left half of the occipital bone below the inferior curved line, involving the edge of the foramen magnum and internal table in the cerebellar fossa.

195. The right half of a Skull, showing an old and partially united fracture of the parietal bone. The line of fracture runs from the vertex to the posterior inferior angle of the bone, measuring about six inches. Union has taken place alone the upper half of the fracture; below, the edges of the bone externally are smooth, rounded, and separated for from one-eighth to nearly half an inch. Viewed from within, a rough deposit of new bone is seen on the posterior fragment, principally along the edge of the ununited portion. There is no displacement.

Taken from a dissecting-room subject.

NASAL BONES.

196. Bones of the upper half of the face, showing a depressed fracture of the nasal bones, which have been driven in on the ethmoid and turbinate bones. The anterior part of the inner wall of each orbit is also fractured and depressed towards the left. The trephine has been applied in two places at the root of the nose. The portion of the frontal bone immediately in front of the crista galli is wanting.

197. Bones of the upper portion of the face, showing an extensive comminuted fracture, with depression of the fragments into the frontal sinuses. The fracture also involves the upper and inner walls of each orbit. A fragment of the left frontal bone is missing.

ZYGOMA.

198. Vide No. 172.

INFERIOR MAXILLA.

199.

200.

FRACTURES OF THE BONES OF THE TRUNK AND EXTREMITIES.

STERNUM.

201. A Sternum, which has been fractured transversely at the insertion of the fourth costal cartilages. There is also an oblique fissured fracture on the posterior aspect, extending from below the insertion of the second left to that of the third right cartilage.

202.

RIBS.

203. Six Ribs, fractured at varying distances in front of their angles. New bone has been deposited in small quantities around each fragment.

204. The acromial end of a Clavicle and a portion of two upper Ribs. The clavicle has been fractured about an inch and a half from the tip. Union has taken place, the inner fragment overlapping and overlying the outer. The two ribs have been fractured transversely three and four inches respectively from their costo-chondral junction; the fragments are overlapping, but are firmly united.

205.

CLAVICLE.

206. A right Clavicle, fractured obliquely about its middle. The ends have overlapped and united by deposit of new bone between them. The broken ends are rounded off and continuons with the permanent callus, which is compact and resembles the original bone.

207. A left Clavicle, fractured obliquely midway between its curves. Bony union has occurred with slight overlapping of the fragments.

208. A right and left Clavicle from the same case. The right clavicle has been fractured at the junction of its curves. The fragments are firmly united, but with considerable shortening from absorption and bending of the bone. The left clavicle, uninjured, is placed by its side, to show the altered shape of the fractured bone.

209. A left Clavicle, fractured obliquely at its middle, and united in good position. The fragments are bound together by new bone, which, though diminished and rounded off by absorption, still retains its porous character.

210.

211.

212. A Clavicle, showing a fracture of the acromial end. The fragments are not united.

SCAPULA.

Body.

213. A right Scapula, the infra-spinous portion of which has been fractured. An irregular line of new bone deposited on both surfaces of the scapula marks the course of the fracture, from the upper part of the inferior border towards the inferior angle. In some parts the fissure is clearly seen, and there are two spots in the course of the fracture where bone is entirely wanting.

214. A Scapula, the acromion process of which is broken off obliquely. A fracture through the glenoid cavity just below the outer attachment of the spine to the body of the bone extends into the infra-spinous fossa, and through the base only of the spine, into the supra-spinous fossa.

215. A Scapula, which has been extensively fractured in that portion of the bone forming the infra spinous-fossa. The fracture extends through the lower and posterior portion of the spine, without completely dividing it, and terminates at the superior angle of the bone.

Acromion Process.

216. A left Scapula, showing a fracture near the end of the acromion process. The edges are rounded, but no formation of new bone has taken place. The fragment is missing.

217. A Scapula. The acromion process has been fractured transversely one inch from the end. The edges of the fragments are rounded off, but union has not taken place. There has also been a fracture through the end of the coracoid process.

218. A Scapula, which has been fractured near the apex of the acromion process. The fragment is retained in position by the coraco-acromial ligament. New bone has been deposited on each surface of the fracture, but union has not occurred.

219. A Scapula, showing an oblique fracture near the apex of the acromion process. Union has not taken place. The fragment is missing. The tip of the coracoid process has also been broken off.

220. A Scapula, fractured near the apex of the acromion process. New bone has been formed upon the fractured surface. The fragment is wanting.

Coracoid Process.

221.

HUMERUS.

Surgical Neck.

222. The Head and upper part of the shaft of a Humerus, which has been fractured high up through the surgical neck. The fragments are impacted; firm bony union has occurred, and a ring of new bone is seen around the base of the head. The tuberosities are covered with new bone, which is smooth on its outer surface.

223. A Humerus, fractured through the surgical neck, and united with formation of a considerable amount of new bone and absorption of a portion of the upper fragment. The latter is displaced forwards, and apparently rotated inwards.

224. A Humerus, which has been fractured obliquely through the surgical neck. Union has occurred with but little displacement. A sharp irregular edge on the anterior surface marks the end of the upper fragment.

Anatomical Neck.

225.

Shaft.

226. A Humerus, which has been fractured obliquely at the junction of the middle with the lower third, and has united firmly without displacement. The upper part of the shaft is thickened and tuberculated from deposition of new bone. There is some indication of an oblique fracture of the middle of the shaft, where also some marked spiral curves are seen. About the lower fracture a bridge of new bone covers in a channel which probably transmitted a vessel.

227. A Humerus, fractured obliquely at the junction of the lower and middle third of its shaft. Bony union has occurred, with slight separation of the fragments, the uniting bone being of a cancellous nature. The lower end of the lower fragment is displaced forward, and the articular surface is directed slightly outwards instead of inwards.

Lower Extremity of the Humerus.

228. Portion of a Humerus with the Radius and Ulna. The lower end of the humerus has sustained a comminuted fracture. One line of fracture passes through the trochlea surface into the elbow joint.

229.

230.

FRACTURES OF THE RADIUS AND ULNA.

Olecranon.

231.

Shafts.

232. An Ulna, which has been fractured obliquely a little below the middle of the shaft. Firm bony union has taken place without deformity, but with some thickening at the point of fracture.

233. A Radius and Ulna. The radius has been fractured obliquely from within outwards and downwards two inches above the wrist joint, and the lower fragment has been split vertically. Bony union has taken place with overlapping of the fragments, the upper overriding the lower, which is also displaced inwards. The upper end of the lower fragment projects as a sharp point towards the interosseous membrane.

Lower Extremities of the Radius and Ulna.

234. A Radius and Ulna, showing a comminuted fracture of the lower end of the radius, and oblique fracture of the ulna at the same level.

From a woman, aged 80, who died from other injuries shortly after admission into the Hospital. The fracture, which was compound, was caused by a wheel passing over the arm.

235. A Radius and Ulna. The radius has been fractured transversely half an inch above the wrist joint. The lower fragment is displaced backwards. New bone has been formed upon its anterior surface, but union has not taken place. The interosseous membrane is diminished in width. The ulna is not fractured.

236. Portion of a Radius and Ulna, with the bones of the Hand. There is a comminuted fracture of the lower end of the radius into the wrist joint, and dislocation inwards of the upper fragment and the radius. New bone has been thrown out around the fracture, apparently from necrosis of a portion of the ulna.

Separation of Lower Epiphyses.

237.

238.

CARPAL BONES.

239.

METACARPAL BONES.

240. Bones of the Hand, showing a fracture of the shafts of the fourth and fifth metacarpal bones, and also of the proximal phalanges of the corresponding digits.

SACRUM.

241.

OS INNOMINATUM.

242. The Pelvic Bones. There is a fracture of the right ilium extending from the crest at the junction of the middle and posterior thirds, directly downwards into the great sciatic foramen. The fragment is broken into three pieces, and the sacro-iliac synchondrosis completely separated. The left pubes is comminuted, and the ramus of the ischium fractured near the tuberosity.

From a man, aged 25, who was killed by some heavy marble slabs falling upon him.

243. The Pelvic Bones of a Boy. The right os innominatum shows three lines of fracture, one passing through the horizontal ramus of the pubes, another through the junction of the ischial and pubic rami, and a third, very irregular in outline, separating the posterior part of the ilium. In the left os innominatum there are two fractures of the descending ramus of the pubes, and one of the ascending ramus of the ischium; the first oblique, the two latter nearly transverse. The bones have separated into their constituent parts in maceration, and the epiphyses have disappeared.

244. A left Os Innominatum, showing a vertical fracture of the horizontal ramus of the pubes, and a fracture of the ramus of the ischium just above the tuberosity. The posterior end of the ilium is comminuted, the principal line of fracture, which is nearly vertical, being met at its centre by another at right angles to it. The sacro-iliac synchondrosis was separated.

245. A left Os Innominatum, showing very extensive fractures. The pubes is fractured at the posterior end of the horizontal ramus, and also through the junction of the ischial and pubic rami. The former is also fractured just above the tuberosity. The acetabulum is fractured so as to resolve it into its constituent parts. There is an extensive fracture of the ilium, the principal line of fracture being a continuation upwards and backwards of the ilio-pectineal line; from this other lines of fracture pass off.

246. A left Innominate Bone, showing one fracture of the auricular surface of the ilium, and a second a little anterior to it. The horizontal ramus of the pubes is broken through at the ilio-pectineal in eminence, the fracture extending across the acetabulum. There is a fracture of the ascending ramus of the ischium. The centre of ossification of the crest of the ilium and tuberosity of the ischium have not united to the bone.

247. An Os Innominatum, which has been fractured. The pubes has been broken off at the acetabulum and at its junction with the ramus of the ischium, and the upper fragment displaced inwards. The symphysial portion is also fractured and driven inwards. The ischium is partially detached from the ilium by a line of fracture running immediately below the ilio-pectineal line; there is also a united transverse fracture of the ramus. A crooked line of fracture runs across the ala of the ilium. The floor of the acetabulum is perforated. New bone has been formed around all the fractured surfaces, and some of the fragments have completely united.

248. A left Innominate Bone. There has been a fracture across the floor of the acetabulum; bony union has taken place, leaving an oval opening in its floor. The fracture probably occurred during youth, as the acetabulum has been separated into its three constituent pieces, and these have again united by bone.

249. A left Os Innominatum, showing a fracture of the posterior bony edge of the acetabulum. The fragments, two in number, have been turned backwards and are attached to the bone by wires. A line of fracture crosses the acetabulum.

FEMUR.

Intracapsular and Extracapsular Fractures of the Neck of the Femur.

250. Section of the upper end of a Femur, showing an intracapsular fracture of its neck. The neck and head of the bone are quite horizontal, and there is no trace of bony union.

From an old woman, aged 94, who sustained the fracture eight years before her death. She was never able to walk after the accident.

Presented by Dr. Arthur Cribb.

251. Upper part of the shaft of a Femur, showing an intracapsular fracture of the neck. The neck of the bone is entirely absorbed, and the head is almost in contact with the lesser trochanter, against which it evidently rested during life, as a kind of facet has formed. There is no bony union.

From a woman, aged 56, who sustained a fracture three months before her death. She was able to stand on the fractured limb. *Post Mortem Reg.*, 1866. No. 130.

252. A Hip Joint, partly laid open, exhibiting an intracapsular fracture of the neck of the Femur. The lower part of the capsular ligament is torn, but the ligamentum teres is entire.

253. The upper end of a Femur of a boy, showing a recent fracture through the neck within the capsule. The line of fracture is irregular, and extends from the base of the head behind, to the middle of the lower border of the neck in front. The epiphyses of the trochanters have not united with the shaft.

254. The upper end of a Femur, of which the neck has been fractured within the capsule immediately beyond the articular surface of the head. The fragments are held together by a portion of the prolongation of the capsule upon the neck, which has been partly absorbed. The periosteum in front of the inter-trochanteric line has been torn. There is no bony union.

255. The upper end of a Femur, showing an intracapsular fracture of the neck. The surface of the upper fragment is smooth, and appears to have rested upon the inter-trochanteric ridge; that of the lower fragment is rough and irregular. The fragments are held together by a portion of the capsule prolonged upon the neck of the bone.

256. The upper end of a Femur, exhibiting an intracapsular fracture of the neck. The plane of the fracture is nearly vertical, and extends from the upper margin of the head to the middle of the lower margin of the neck.

From Mr. Shaw's Collection.

257. Upper end of a Femur fractured within the capsule. The line of fracture is irregular.

258. Portion of a Femur, showing an intracapsular fracture of the neck. The line of fracture is oblique, and extends through the middle of the neck, a part of which has been absorbed.

259. Section of the upper part of a Femur, showing fracture of the neck through its base. The fracture extended into the capsule of the joint, which was lacerated. There is also a fracture of the shaft of the bone between the trochanters. Firm ligamentous union occurred between the fractured parts in the neck; in the specimen the line of union is denoted by bristles. The fractured ligament was greatly thickened. The fracture through the shaft has united by bone, and much new bone has been deposited on the outer surface.

From an old woman, aged 56 years, who had been the subject of cancer of the breast for two years. The breast was removed by operation, but a few months after recurrence took place in the surrounding skin and other parts of the body. She became greatly emaciated and enfeebled. In attempting to get out of bed, she fell on the floor, producing the fracture. The foot immediately after the accident was inverted, but became afterwards deverted.

It is curious that such an amount of repair should have taken place in a subject enfeebled by so much constitutional disease. Vide *Med. Chir. Trans.*, vol. xiii, p. 493.

Engraved in Sir Astley Cooper's work on *Dislocations and Fractures of Joints.*

260. Section of the upper part of a right Femur, which has been fractured through the base of the neck and across the great trochanter from before, obliquely downwards and backwards. The shaft has been driven an inch upwards, so that the lower half of the fractured surface of the neck embraces the inner part of the shaft. The fragment of the great trochanter is inverted behind the neck of the femur, its fractured surface looking upwards, and its posterior prominence downwards, whilst the corresponding posterior margins of the fracture are in contact. The fragments are united by the deposition of new bone, which surrounds them. The articular surface of the head of the femur is extended by the addition of a quarter of an inch of new bone overhanging from its lower edge.

261. The upper end of a Femur, exhibiting a fracture through the base of the neck, with a second oblique fracture separating the upper and posterior part of the great trochanter from the shaft. Some new bone has been formed at the edges of the fracture, but union has not been effected.

262. The upper end of a Femur, showing a comminuted fracture through the base of the neck just beyond the anterior inter-trochanteric line. Another line of fracture following the posterior inter-trochanteric line completely separates the trochanters. This fragment is further comminuted into five distinct pieces. Three is no union.

263. The upper portion of a Femur, exhibiting a comminuted fracture through the trochanters and base of the neck, and extending into the upper part of the shaft.

264. The upper end of a Femur, exhibiting an extensive comminuted fracture through the base of the neck and trochanters and adjacent portion of the shaft. The trochanter major is broken into three pieces, and the posterior fragment, with the lesser trochanter, is completely detached. Another fracture follows the anterior inter-trochanteric line. A portion of the head of the bone has been absorbed, leaving a surface of ivory appearance, and exposing the cancellous structure beneath. A dense ring of new bone has been deposited around the junction of the head with the neck, and there is also a nodule of new bone on the anterior surface of the latter. These changes are the result of rheumatic arthritis.

265. Upper part of a Femur, fractured at the base of its neck. The line of fracture extends along either inter-trochanteric line, and through the adjacent parts of both trochanters. The fractured end of the neck is convex, and the shaft is a good deal hollowed out, so as with the trochanter minor to form a

deep cup; the points and edges of the fractured ends are partly rounded off, and some new bone has been deposited on the shaft at the lower part of the fractured edge. A fragment of bone from the shaft is the only part firmly united.

266. A part of the upper end of a Femur, exhibiting a recent comminuted fracture, following the inter-trochanteric lines, and also separating the trochanters from the shaft, and a portion of the great trochanter from the lesser.

267. Portion of the upper end of a Femur, fractured through the inter-trochanteric lines. A small quantity of new bone has been formed around the fracture.

268. Upper portion of the shaft of a Femur, fractured through the base of the neck and trochanters. The neck of bone is partly buried in a hollow in the cancellous tissue of the trochanters.

269. The upper end of a Femur, showing a recent comminuted fracture through the base of the neck, and extending downwards into the upper portion of the shaft. Another fracture separates the trochanters from the shaft. A portion of the great trochanter is wanting.

270. The left side of a Pelvis with the Femur. The bones have been cleaned, the only soft parts remaining being the capsule of the hip joint, the obturator and gluteus minimus muscles, and the great sacro-sciatic ligament. There has been an extracapsular fracture of the neck of the femur, roughly following the inter-trochanteric line. On the posterior aspect of the great trochanter there is a rounded and flattened boss of bone nearly equal in size to the head of the femur. The femur is rotated outwards to such an extent that the internal condyle looks almost directly forwards.

From a man, aged 69, who slipped, whilst coming down stairs, and fell with great force on to his right great trochanter. He was unable to raise himself after the fall. He was admitted into the Hospital 2nd November, 1879, an hour after the accident; there were some doubts at first whether the large boss of bone might not be the displaced head of the femur. During the treatment he was attacked with pneumonia, and died 11th December.

Reported in *Path. Soc. Trans.*, vol. xxxi, p. 214.

Presented by Henry Morris, Esq.

Shaft.

271. The upper end of a Femur, exhibiting a fracture of the shaft just below the lesser trochanter. Firm bony union has occurred, but the fragments are slightly overlapping, the upper end being tilted forwards, and the lower drawn up behind it. The fractured surfaces are rounded off, and a considerable amount of new bone has been formed.

272. A Femur, showing union after a comminuted fracture of the upper part of the shaft. The bone has been split into four fragments, which are now firmly united.

273. The upper half of a Femur, exhibiting a recent comminuted fracture at the junction of the upper and middle third of the shaft. A V-shaped portion of bone is separated, the apex of the fragment being towards the linea aspera.

274. The upper half of a Femur, showing a recent fracture of the shaft about four inches below the great trochanter.

275. Portion of a Femur, fractured into several pieces about the junction of the middle with the lower third of the shaft. One fracture extends almost as far as the external condyle.

276. The lower third of the shaft of a Femur, with the condyles, showing a comminuted and impacted fracture about four inches from the articular surface. A portion of the shaft has been completely separated and everted, so as to expose the medullary canal, which is seen to contain effused blood. The upper fragment is firmly wedged into the cancellous tissue of the condyles, but the fracture does not extend into the knee joint. There is no sign of repair.

Lower extremity of the Femur.

277. The lower end of a Femur, exhibiting a comminuted fracture just above the condyles. A vertical fissure extends downwards towards the joint on the posterior aspect. The epiphysis for the condyles has not united with the shaft. Some portions of the bone are wanting.

278. The lower half of a Femur, showing a comminuted fracture just above the condyles, separating them from the shaft and from each other, and extending between them into the joint. There is also a fissured fracture of the lower end of the shaft, a continuation upwards of the principal line of fracture.

279. The lower end of a Femur, showing a vertical fracture through the shaft and condyles into the joint. A portion of the outer fragment is missing, and the whole fracture is not included in the specimen. Some new bone has been formed upon the surface of the fragments.

280.

PATELLA.

281. A Patella, exhibiting an irregular transverse fracture. The fragments are in apposition posteriorly, but the anterior surfaces are half an inch apart, and the fibrous expansion covering the bone is torn through. Bony union is in progress on the articular surface.

From Mr. Shaw's Collection.

282. A Patella, which has been fractured transversely about its centre. On the articular surface the edges of the bone are from a quarter to half an inch apart, the interval being occupied by blood clot. There is no union.

283. A Patella fractured, vertically near its margin. There is incomplete bony union between the fragments.

284. Two Patellæ, from the same subject. One has been fractured transversely, the other vertically. The fragments of the former are much diminished in size, their edges rounded. Union has not taken place. The latter fracture has united, except at the upper part. There is a deep furrow on the articular surface corresponding to the fracture.

285.

TIBIA AND FIBULA.

Upper extremity.

286. A Tibia and Fibula. The tibia shows a recent extensive comminuted fracture of the head through the outer condyle, and also of upper part of the shaft. The head of the fibula is fractured just below the articulation. A considerable portion of the anterior part of the head of the tibia and the head of the fibula are missing.

287. A Tibia and Fibula, showing a comminuted fracture of both bones. The tibia is broken into several pieces in the head and upper third of the shaft; the fibula is broken obliquely through the front of the head, and again in the shaft about its centre.

Shafts.

288. A Tibia, fractured obliquely through the centre of the shaft, and united with slight lateral displacement.

289. A Tibia and Fibula, which have been fractured obliquely in the lower third, probably at some period long preceding death, and have united firmly. The lower half of the fibula is much thickened, and curved towards the tibia, and for three inches united to it by new bone. The lower half of the tibia is also greatly enlarged, and presents on the outer aspect of the shaft an oval surface of finely porous bone, possibly the site of an ulcer of the leg.

290. A Tibia and Fibula, fractured obliquely from behind forwards, about the junction of the middle and lower third of the shafts. The lower fragments are lying behind, and to the outer side of the upper, and overlapping them for about two inches. A considerable amount of new bone has been formed about the fractured ends and also on the shafts of the bones above and below, but there is not now bony union. There are also several fissured fractures of the lower fragment of the tibia and of the fibula, which have united without displacement. One of the former which separates the outer malleolus extended into the joint.

Lower Extremities of Tibia and Fibula.

291. A Tibia and Fibula. The tibia shows a recent comminuted fracture of the lower third with fissures extending into the ankle joint. The fibula is fractured transversely five inches above the lower end, and again obliquely an inch from the tip of the malleolus.

292. A Tibia and Fibula, showing an ununited fracture two inches above the ankle joint. The lower fragment of the fibula overlaps the upper for about half an inch, and is lying to its outer side. The lower fragment of the tibia is tilted forwards and lies behind the upper; it presents a united fissured fracture which extends into the ankle joint and separates the inner malleolus. A considerable amount of new bone has been deposited about the fragments.

293. A united "Pott's Fracture" at the Left Ankle Joint; both bones are comminuted. There is firm union, but at such an angle that that formed by the two fragments of the fibula is a right angle, and the lower fragment of the tibia, which is in three pieces, is united to the outer part of the shaft at an angle only slightly greater. There is a wide interval on the inner side between the lower end of the shaft of the tibia and its lower fragment.

294. A Tibia and Fibula. The tibia shows a fracture of the internal malleolus; the fibula a recent comminuted fracture of the lower end.

295. The lower end of a left Fibula, showing a recent oblique fracture running downwards and forwards just including the upper part of the articular facet.

The patient, a man, aged 37, died in the Hospital of pneumonia thirteen days after the injury, which was caused by slipping off the kerbstone when carrying a load.
Surg. Reg., 1861, No. 271.

296.

BONES OF THE FOOT.

ASTRAGALUS.

297. A right Astragalus, fractured through its neck. The head of the bone is completely separated.

The astragalus was dislocated inwards, and presented in a long wound on the inner aspect of the foot.

298. A right Astragalus, fractured nearly transversely through both the upper and lower articular surfaces.

The patient died of phlebitis a fortnight after the accident. At the autopsy pus was found in the ankle joint.

299. The lower half of a left Leg and the Foot dissected, and the bones laid bare. Showing a united fracture across the neck of the astragalus, with horizontal outward displacement of the foot beneath the body of that bone. The head of the astragalus remains in its proper position to the scaphoid. New bone has been thrown out around the body of the astragalus, whereby it is connected firmly with the os calcis and the tibia. The fibula is resting on the upper surface of the os calcis, to which it is united by bony anchylosis. All the tendons passing round the outer and inner ankle have been torn completely asunder, and formed new attachments to the fibrous and osseous structures near them. A small fragment of the astragalus is adherent to the posterior tibial artery. The arteries and nerves are intact, but the former are very atheromatous.

Reported in the *Path. Soc. Trans.*, vol. xxxii, p. 156.

Presented by Henry Morris, Esq.

300.

FRACTURES OF CARTILAGES.

301. A portion of a left Costal Arch, showing a fracture of the 8th cartilage. The fragments have united, but are overlapping, the outer fragment lying in front of the inner.

302.

303.

SERIES IV.

INJURIES OF JOINTS, DISLOCATIONS &c.

DISLOCATIONS OF THE CLAVICLE.

OF THE STERNAL END.

304.

Vide Series XLII, Nos. 81, 82.

305.

OF THE ACROMIAL END.

306.

307.

DISLOCATIONS OF THE SHOULDER JOINT.

SUB-CORACOID.

308. A left Shoulder Joint. The head of the humerus is dislocated downwards; the capsular ligament extensively ruptured, and the long head of the biceps torn across. A fracture also runs across and partially detaches the lower part of the glenoid cavity.

SUB-CLAVICULAR.

309.

310.

SUB-SPINOUS.

311.

Vide Series XLII, Nos. 83, 84, 85, 86, 87, 88, 89, 90, 91, 92.

DISLOCATION OF ELBOW JOINT.

RADIUS AND ULNA BACKWARDS.

312.

313.

RADIUS FORWARDS.

314.

RADIUS BACKWARDS.

315.

DISLOCATION OF WRIST JOINT.

CARPUS FORWARDS.

316.

317.

DISLOCATION OF THE DIGITS.

318.

Vide Series XLII, Nos. 95, 96, 97, 98.

DISLOCATION OF THE HIP JOINT.

BACKWARDS.

319. A portion of an Innominate Bone with the upper end of the Femur. The head of the femur has been displaced from the acetabulum, and is seen lying upon the glutei muscles covering the dorsum ilii. The ligamentum teres is torn from its acetabular attachment. The head of the femur has escaped through a rent in the posterior portion of the capsular ligament, which extended from the middle of the under surface of the pectinous muscle to the digital fossa, and was divided into two portions by the obturator externus.

From a man, aged 46, who was admitted into the Hospital 23rd April, 1883, for a recent dislocation of the left hip on to the dorsum ilii, and a compound fracture of the head of the left tibia, extending into the knee-joint, complicated with inward dislocation of the tibia. The dislocations were reduced. The thigh was amputated just above the femoral condyles on 14th May. On the following day an abscess discharging offensive pus broke through the skin of the left buttock, and on 17th May a similar abscess was opened on the right buttock. On 21st May the patient died from secondary hæmorrhage, due to the spread of inflammation upwards along the femoral vessels.

The muscles about the hip-joint were infiltrated with pus and broken down blood clot, and the whole were in a state of gangrene. The head of the bone was in the acetabulum. (In the specimen it has been restored to the place it occupied before reduction was effected.) There was a fracture of the head of the tibia almost separating the external tuberosity from the shaft.

Vide No. 117.

The patient was under the care of Mr. Hulke.

320.

DOWNWARDS INTO THE OBTURATOR FORAMEN.

321. A right Hip Joint. The head of the femur is dislocated into the right obturator fossa. The capsular ligament is extensively ruptured, and the round ligament torn from its pit in the head of the femur.

From a man, aged 28, deformed by rickets, who threw himself from a house 60 feet high. The dislocation was reduced, but after death the parts were replaced in their original position. He also sustained a compound comminuted fracture of the opposite thigh, and died from shock fifteen hours after the accident, 10th October, 1858.

Reported in *Path. Soc. Trans.*, vol. ix, p. 241.

Presented by A. Shaw, Esq.

FORWARD AND UPWARDS.

322.

323.

REPARATIVE CHANGES AFTER REDUCTION.

324. 325.

326.

DISLOCATIONS FROM DISEASE.

327.

Vide Nos. 678, 679.

328.

CONGENITAL DISLOCATION.

329. A right Innominate Bone and Femur, with the muscles and ligaments dissected. The head of the femur is dislocated upwards; it rests on the margin of the acetabulum, and is directed backwards. No trace of the ligamentum teres to be seen on the head of the bone, but the dimple for its reception is well marked, and smoothly covered with cartilage. The femur is inverted. The dislocation is said to have been congenital.

330.

DISLOCATION OF THE PATELLA.

331.

Vide Series XLII, Nos. 101, 102.

DISLOCATION OF THE FOOT.

332. The lower half of a Tibia and Fibula, with the Tarsal and part of the Metatarsal Bones, showing an old united fracture of the inner malleolus with partial dislocation of the foot by rotation round its antero-posterior axis. The foot is so much displaced from the tibio-fibular mortice that the posterior extremity of the superior and inner edge of the astragalus corresponds to the central part of the trochlea surface of the tibia; the articular surface of the external malleolus to that of the posterior part of the trochlea of the astragalus.

From an old woman, who died in the Middlesex Hospital from advanced malignant disease of the breast. She had met with an accident nineteen years before, whereby her ankle was broken. The foot was greatly deformed and in the position of extreme talipes equino-varus. A large bursa developed to the outer and dorsal side of the foot.

Vide *Path. Soc. Trans.*, vol. xxxii, p. 158.

Presented by Henry Morris, Esq.

DISLOCATION OF THE ASTRAGALUS.

333.

334.

Vide Series XLII, Nos. 102, 103, 104.

DISLOCATIONS OF THE DIGITS.

335.

SEPARATION OF SYMPHYSES, &c.

336.

337.

DISLOCATION OF ARTICULAR CARTILAGES.

338.

339.

SERIES V.

DISEASES OF BONES.

ABNORMALITIES.

Arrest of development.

340. Extremity of the stump-like Arm of a man, showing five small elevations of the skin representing so many rudimentary digits.

341. Macerated Bones from the same Arm. The lower end of the radius is much thickened, and bears upon its lower end a prominent ridge of bone which represents the undeveloped carpus. The end of the ulna is small, and the styloid process is absent.

Reported by Dr. Cayley, in *Path. Soc. Trans.*, xvii, p. 430.

342.

Excess of development.

343. The Bones of a right Hand, of which the thumb is double. The metacarpal bone is single and normal in appearance, but upon its head two phalanges are placed, and each of these has a terminal phalanx and a nail. At the base the inner phalanx is the larger, but at the terminal phalanx and nail the outer. The long flexor tendon divides opposite the base of the terminal phalanx, and is continued on to both phalanges; the inner thumb does not appear to have any long extensor tendon.

344.

HYPERTROPHY.

345. A section of the Skull of a child, exhibiting great enlargement of all the bones, except those of the face, in adaptation to the increased size of the brain in hydrocephalus. The enlargement is in all the diameters. The coronal suture is widely separated, and bone is wanting over a large area representing the anterior fontanelle. The posterior fontanelle was also open. Wormian bones in great numbers and of large size intervene between the edges of the lambdoid and squamous sutures. The superior walls of the orbits are drawn obliquely upwards. Large bosses are seen in the frontal and parietal regions. The bone generally is thin and light. The bones of the face present a marked contrast in size to those of the skull.

See No. 851.

For other specimens of hydrocephalic skulls, see Nos. 852, 853.

346.

ATROPHY.

347. A vertical section of the greater part of a left Tibia and Fibula with the Tarsus and Metatarsus, showing extreme atrophy from disuse of the leg. The compact tissue is reduced to a thin shell, and in places perforated by foramina, due to its total conversion into spongy bone. The greatly expanded medullary cavities in the recent state were filled with a pinkish-yellow fatty material from the degenerated medulla. The growth of the bones has been retarded, and the tibia and fibula are markedly curved, the convexity being forwards.

348. The upper portion of a Tibia and Fibula from an amputation stump. The bones, especially the fibula, are much atrophied and very light. Their sawn ends are united by new bone, and are pointed.

349. The bones of a right upper extremity with the Scapula and Clavicle, showing extreme atrophy. All the bones are very light and fragile. The shaft of the humerus is not thicker than the fibula of a boy, and is twisted. The radius and ulna are rounded, and about equal in diameter to a large goose quill. Both extremities of the humerus and the lower end of the radius have been fractured, possibly in removing or mounting the specimen. An apparent deformity of the hand is probably due to the same cause.

350. 351.

352.

ABSORPTION FROM PRESSURE.

353. Six of the lower Dorsal Vertebræ with part of the Thoracic Aorta. The artery for a length of three inches is dilated into an aneurism, which bulges chiefly backwards, and is bounded behind by the bodies of five dorsal vertebræ which are deeply eroded. The intervertebral fibro-cartilages and contiguous edges of the bones are less affected than the other parts, but have not escaped so completely as sometimes happens.

354. The left half of a vertical section through the bodies of four lower Dorsal and three Lumbar Vertebræ, showing extensive erosion of the bodies, except the highest and lowest. The cancellous tissue is much more deeply affected than the intervertebral discs, and there is no displacement, curvature, or anchylosis. The spinal canal is not encroached upon. These changes have probably resulted from the pressure of an aneurism.

355. The base of a Skull, from a man who had been long in the habit of wearing a plug to close an opening in the palate. The opening was thus gradually enlarged, and attained to such a size that nothing now remains of the palatine portion of the superior maxillary bone, and the alveolar border of the jaw is reduced to a thin plate, presenting no trace of the sockets for the teeth. The antrum is on both sides almost obliterated by the apposition of its walls, the inner wall having been pushed outwards as the plug was enlarged to fit the enlarging aperture in the palate. The triangular cartilage of the septum nasi remains almost intact. The lachrymal bones have been partly absorbed, and the bone forming the roof of each orbit and the temporal fossæ is remarkably thin.

For history of the case, *vide* Series III, No. 157; Series V, No. 496, Series XXV, No. 1633, Series XXVII, No. 1699.

INFLAMMATION OF BONE AND PERIOSTEUM, AND ITS RESULTS.

DIFFUSE PERIOSTITIS (Acute Necrosis).

356. A right Tibia and Fibula, with the soft parts and a portion of the

integument. The shaft of the tibia, except along its anterior border, is denuded of periosteum; its surface is smooth, white, and necrosed. Where the periosteum remains it is much thickened and softened, and its inner surface where detached is covered with granulations. The lower articular surface is in part denuded of cartilage.

The patient was a strumous girl, aged 13, whose thigh was amputated by Dr. Cooper Rose in 1858. The attack began with inflammation of the ankle joint, and was followed by acute periostitis.

Reported in *Path. Soc. Trans.*, vol. x, p. 214, by Mr. W. H. Flower, F.R.S.

357. A Femur, showing the results of diffuse periostitis. The thickened periosteum is detached from the lower third of the shaft and from considerable areas of the upper part. The exposed surface is undergoing necrosis, limited to the cortical layer of the shaft. The articular surfaces, both of the head and condyles, are in part denuded of cartilage, discoloured, and roughened. The great trochanter is separated from the shaft by a fracture which runs obliquely downwards and outwards from the upper surface of the neck. The fragments have not united.

From a boy, aged 15, who received the fracture in falling from a high stool. The nature of the injury not having been ascertained, he continued to walk about for some time, until febrile symptoms appeared, when he was brought to the Hospital, where he died of pyæmia.

358.

359.

Vide Nos. 449, 451, 452.

INFLAMMATION OF THE PERIOSTEUM, WITH FORMATION OF NEW BONE (Osteo-plastic Periostitis).

360. A portion of the Shaft of a Femur, partly covered at one spot with a layer of very porous new bone, the result of inflammation of the periosteum. The surface of the shaft above and below this area is marked by fine longitudinal grooves for the transmission of blood vessels, but is otherwise healthy.

361. A longitudinal section of a Femur, showing the greater part of the shaft to be enlarged by the deposition of new spongy bone upon it, from inflammation of the periosteum. The limits of the original compact layer can in places be clearly seen, and at the point of greatest thickening this is now half-an-inch from the surface. The new superficial layer is in part dense and compact, but over a large area is still in a spongy and porous condition. The medullary canal about the point of greatest thickening is filled with new cancellous tissue.

362. A Femur, much thickened from the formation of new bone on the surface, which has become dense by the filling in of its spaces. The lower half is seen in section, and shows that the cancellous tissue has been to some extent absorbed.

363. The posterior half of a longitudinal section of a Femur, exhibiting great thickening of the compact layer of the shaft with narrowing of the medullary canal, and formation of new bone on the linea aspera. The bone presents a forward curve, chiefly in the lower third of the shaft. The epiphyses have but recently united to the bone.

364. A Tibia and Fibula, with the Tarsus and Metatarsus. Both long bones are much thickened from deposit of bone in irregular nodules on their adjacent surfaces, uniting them together for the greater part of their length. The

internal aspect of the tibia is also much thickened, but smooth and finely porous, and in the fibula the lines of muscular attachment are made prominent by the deposit of new bone. The surface of the os calcis is also rough from a similar cause.

365. A Humerus, showing enlargement and thickening of the lower end of the shaft from the formation of new bone, the result of inflammation. The new bone is greatest in amount on the posterior aspect of the shaft, where it is very porous, but firm; on the anterior surface the pores are finer. The articular cartilage is ulcerated in places.

From Mr. Shaw's Collection.

366. A Tibia, showing extensive deposits of porous new bone in long smooth sharp ridges on the anterior and posterior surfaces. On both surfaces the deposit is greatest about the centre, and gradually diminishes towards the articular ends. The epiphyses have separated in the process of maceration.

367. A Fibula, much enlarged from a deposit upon the surface of dense new bone. The lines of muscular attachment are well marked.

368. A Tibia and Fibula, showing the results of inflammation in the formation of new bone upon the surface. Both bones have been fractured obliquely about the centre of the shafts. On the posterior surface of the upper portion of the tibia there are marks of the bone having been sawn, suggesting that the fracture was compound. The ends have not united, probably from the great displacement of the lower fragments, which are lying to the outer side of the upper, and overlapping them for nearly three inches. Laminæ of minutely porous new bone, presenting longitudinal grooves, have been formed on the surface of the fragments, the ends of which are undergoing necrosis, a well-marked groove of demarcation being evident. A similar change is also in progress over a small area on the shaft of the tibia above the fracture. The medullary canal of the upper fragment of the tibia is closed by a deposit of new bone.

369. A Metatarsal Bone, showing a formation of porous new bone on the surface, the result of inflammation.

FORMATION OF NEW BONE RESULTING FROM THE IRRITATION OF ULCERS OF THE INTEGUMENTS.

370. The lower end of a Tibia, injected, showing a considerable deposit of new bone on the inner and posterior surfaces, which are seen to have been very vascular. The disease was the result of an ulcer of the integument overlying the bone.

371.

372.

OSTEO-MYELITIS AND ACUTE OSTITIS.

373. A longitudinal section of the lower end of a Femur. The bone is in great part denuded of periosteum and necrosed. The cancelli and medullary cavity are filled with inflammatory products.

From a boy, aged 12, who was admitted into the Hospital 7th April, 1856, with acute inflammation of the lower part of the femur and knee joint of four days' duration. He had not received any injury. Amputation was performed through the middle of the thigh by Mr. Moore, 9th May. On 14th June he was discharged well.

Vide *Surg. Reg.*, vol. iii, No. 176, 1856.

374. Sections of the upper part of a Femur after amputation, exhibiting the effects of inflammation of the cancellous tissue and periosteum. The medullary and cancellous tissue of the head and neck are filled with lymph and pus, and in one section of the great trochanter a mortar-like substance is seen. The periosteum is thickened and separated from the bone, which at the lower extremity is undergoing necrosis. One section shows a fracture of the neck, and the other of the shaft; these were produced in sawing the bone.

From a woman, aged 24, whose thigh was amputated by Mr. Arnott, 9th May, 1845, for disease of the lower end of the femur and knee-joint, of six years' duration. She died of pyæmia 29th May.

From Mr. Shaw's Collection.

375.

376.

INFLAMMATION OF BONE, WITH FORMATION OF NEW BONE AND THICKENING AND OTHER PROCESSES ATTENDED WITH THE FORMATION OF NEW BONE (Osteo-Plastic Ostitis and Periostitis).

377. A Skull, exhibiting an enormous hypertrophy of the parietal and frontal bones, and to a less extent of the occipital also. A wedge-shaped portion has been removed from the left side to show the thickness and density of the bone, and the trephine has been applied over the parietal eminence apparently with the same object. Over the left frontal eminence the diameter is three-quarters of an inch, over the parietal seven-eighths of an inch, near the occipital protuberance five-sixteenths of an inch. The coronal and interparietal sutures are obliterated, and the grooves for the meningeal vessels are strongly marked. The bones forming the base of the skull present no change.

378. The lower end of a Femur, with the patella and the greater part of the tibia and fibula articulated. The femur and patella are normal, and present a great contrast to the tibia, which is enormously thickened and heavy: the section at its lower end measuring one and seven-eighths of an inch transversely from side to side, and one and thirteen-sixteenths of an inch from before backwards. An enormous deposit of new bone appears to have formed around the original shaft; its surface is extremely rough, porous, and spiculated, and shows deep grooves for tendons and muscular attachments. On section the new bone is seen to be extremely dense. The tibia has sustained a recent comminuted fracture in the upper third, extending into the knee joint. The fibula is of normal size, and has also been fractured in two places in the upper third of its shaft.

The fractures were caused by a cart-wheel passing over the leg.

379. A Tibia, exhibiting the results of inflammation. New bone has been deposited on the surface of the shaft, and has subsequently become indurated and smooth, producing a great increase in the size and weight of the bone. The medullary canal is filled with inflammatory products, and is partially obliterated.

380. A Skull Cap, showing great thickening of the frontal and parietal bones from deposition of new bone upon the inner table. The coronal suture is distinct externally, but on the inner surface only faint traces of it can be detected. The bones are thick and very heavy.

381. A Skull Cap, exhibiting extreme thickening of all the bones, probably from syphilitic disease. The section of the frontal bone measures nine-sixteenths of an inch. The outer table is slightly rough, and presents a very finely porous appearance; on the inner table an abundant formation of new bone has occurred, as is seen by the number and great depth of the grooves for the meningeal vessels. The surface is rough and tuberculated.

382. A Calvaria, exhibiting great thickening of the frontal and parietal bones. The section of the frontal bones measures half an inch, and is almost entirely made up of cancellous bone with compact surfaces. The grooves for the meningeal vessels are numerous and deep. The sutures are obliterated internally, and the interparietal suture on the outer aspect also. A ridge of bone marks the line of the frontal suture.

383. A vertical section of the upper part of a Tibia, showing a thick layer of rough porous new bone on the surface. Lower down this gradually becomes smoother, and is marked by longitudinal grooves. The cancellous structure of the upper end of the bone is consolidated into dense compact tissue, and the upper part of the medullary cavity of the shaft is filled up by a deposit of a similar character. The compact layer is much thickened.

384. A portion of a Fibula, much thickened from a deposit of very dense new bone upon the surface of the shaft. The section shows that the cancellous structure of the shaft has been replaced by osseous growth of almost ivory hardness. Transverse grooves on the surface mark the position of the vessels of the periosteum.

385.

OSTEITIS DEFORMANS.

386. A longitudinal section of a Femur, presenting a well-marked anterior curve, the result of osteitis deformans (Paget). The bone is increased in weight from the formation of new bone on the surface. This is dense, but presents numerous apertures for the transmission of vessels. The compact substance is in every part greatly increased in thickness. The section is in some places dense and compact, and in others porous. The medullary canal is very large. The head of the bone is set on at a right angle, and is enlarged and nodular on the surface.

From Mr. Shaw's Collection.

387. A Lower Jaw. The bone is uniformly enlarged; all the molar and præmolar teeth are wanting; the sockets of the incisors and canines are still present, and the outer incisor and canine teeth of the left side are fixed in the bone. The sockets of the molar teeth, except that for the first right and the last left, are filled up by bone. The socket of the first right molar is much enlarged, and admits the tip of the forefinger. The alveolar border of the bone is greatly expanded, especially in the molar regions, where it measures two inches and a half in depth; the rest of the bone is also much increased in thickness, the groove and foramina for the inferior dental vessels and nerve being remarkably wide and deep. The condyle on either side has a short thick neck, and the sigmoid notch is wider and less deep than usual. The angle is as obtuse as in edentulous jaws.

This and the four following specimens were removed from the same patient, a man, aged 65, who was admitted into the Hospital, under the care of Dr. Cayley, 7th September, 1878, and died on 6th October. For four and a half years he had suffered from severe dyspeptic symptoms, accompanied with pain in the lower jaw, where a fistulous opening formed. The jaw was noticed to be enlarged in May, 1873; shortly afterwards he was attacked with severe rheumatic pains in the legs, which gradually became curved.

For eighteen months he had suffered from cough and expectoration, and a year previously he had hæmoptysis, which lasted six months, sometimes to the extent of half a pint in a day. He had been emaciating rapidly, and had suffered from severe pain after taking food.

Hæmoptysis came on after he had been a few days in the Hospital, and continued up to the time of his death.

At the post-mortem examination, in addition to the bone lesions illustrated by this and the four following specimens, he had fibroid phthisis of the right lung, near the root of which there were also several white nodules of medullary cancer, the size of hazel nuts. The thickened right pleura was infiltrated with cells resembling those found in the nodules.

The liver contained ten white nodules similar to those in the lung.

The mucous membrane of the stomach was much thinned.

There was no cancer elsewhere.

Reported in *Path. Soc. Trans.* vol. xxix, p. 172.

Presented by Dr. Cayley.

388. The Clavicles from the same case. The bones are unsymmetrical, the right is slightly enlarged, it weighs one and a half ounces, and measures two and one-eighth inches in circumference at its central part. The left is much enlarged and misshapen; the surface is finely porous; the circumference of the middle part of the bone is two and three-quarter inches; it only weighs a quarter of an ounce more than the right one, showing that the increase in size is not due to any increased formation of bone earth.

389. Sections of the right Tibia with the Fibula. The tibia is much thickened, and is curved forwards; the surface is rough and porous looking; the medullary cavity is enlarged, and occupied by a cancellous bone tissue with wide meshes, in which the medulla was lodged. This consisted of a gelatinous or mucoid material of a yellowish colour. The compact tissue forms a layer varying in thickness from a quarter to half an inch, and is unusually porous in texture. The tibia measures thirteen and a half inches in length, the transverse diameter of the head is two inches and a half, of the shaft from two inches to one and a half; of the lower end one inch and seven-eighths. The fibula appears to be unusually strong, but is not otherwise altered.

390. A portion of the Calvaria from the parietal region. The bone is much thickened, measuring five-eighths of an inch in diameter. It is very light, of a soft consistence and finely porous texture, there being hardly any distinction between the diplöe and the inner and outer tables.

INFLAMMATION OF BONE WITH RAREFACTION (Rarefying Osteitis).

391. A piece of the lower end of the shaft of a Humerus. The compact tissue is light, porous, and spongy; the surface is encrusted with new bone.

From a boy, aged 8, whose elbow had been excised for scrofulous caries. The wound never healed, and he died with anasarca four months afterwards.

392. The lower end of the stump of a Humerus, three inches in length, removed after amputation. The bone shows extreme rarefaction, the result of inflammation.

393. The head and upper part of the shaft of a Femur. The shaft and trochanters are enlarged, partly from the formation of new bone, but chiefly from the expansion of the cancellous tissue. The bones are finely porous, very light and brittle. A fracture extends through the base of the neck and trochanters. A portion of the cartilage of the head of the bone has been destroyed by ulceration; the surface of the shaft also shows extensive ulceration.

394. 395.

INFLAMMATION OF BONE WITH CASEOUS DEGENERATION OF THE INFLAMMATORY PRODUCTS AND TUBERCLE IN BONE.

396. 397.

398. 399.

400.

ABSCESS IN BONE.

401. Portion of the Bones of a Left Ankle Joint. In the lower part of the tibia there is a spherical cavity the size of a hazel nut, partly lined by lymph. It encroaches on the articulation, where it is covered with firm fibrous tissue, and opens on the anterior surface of the tibia close to the fibula, the bones being firmly anchylosed. It was continued as a fistulous channel in the soft parts to the outer side of the ankle.

From a man, aged 53, a turner, whose leg was amputated. The disease had existed for many months.

Vide Case Book, 1844, p. 8.

402. A section of the upper end of a Tibia. In the head of the bone, which is expanded and rarefied, there are several abscess cavities communicating with the joint through ulcerated openings in the articular surface. Just below the head the medullary canal is filled for the distance of an inch by inflammatory products, which have indurated. Lower down the canal is expanded. New bone has been formed on the surface of the head and shaft, for the most part spongy and porous on the former, but with an ivory like surface on a part of the latter.

403.

404.

INFLAMMATION WITH ULCERATION (CARIES).

ULCERATION OF THE COMPACT TISSUE.

405. A portion of the shaft of a Tibia, of which the upper part is seen in vertical section. The compact layer is ulcerated and rarefied, and new bone has been formed on its surface. The cancellous tissue is filled with caseous looking material.

406. A portion of the shaft of a Radius of a child, very light and brittle, showing carious ulceration of the compact layer, with a deposit of new bone on the surface.

407. An Innominate Bone, macerated and dried. The ala of the ilium is perforated, and almost the whole bone rarefied and rough from carious ulceration. This condition is most marked round the acetabulum, the ischial and pubic portions of which are detached from the rest by ulceration. The smooth lining of the articular surface is only in part destroyed. The disease followed inflammation of the hip joint.

408.

ULCERATION OF THE ARTICULAR SURFACES.

409. An Os Innominatum, exhibiting the results of inflammation in the deposit of new bone around the margin of the acetabulum, the socket of which is affected with carious ulceration. This latter change is seen to be present to a slight extent over the greater part of the rest of the bone. The whole bone is very light and porous. The epiphyses of the ischial tuberosity and crest of the ilium have not united.

410. An Innominate Bone. The acetabulum is enlarged into an irregular cavity, the walls of which show carious ulceration. The three pieces of which it is composed are separated, and there is a large triangular perforation in its centre. The greater part of the bone is rarefied and ulcerated. Some new bone has been formed around the edge of the acetabulum.

411. An Os Calcis, the upper and inner surfaces of which are ulcerated, porous, and carious. The posterior articular facet is completely destroyed. Much new bone has been formed on the surface adjacent to the carious parts.

412. An Astragalus and Os Calcis. The upper articular surface of the astragalus has been destroyed by ulceration, exposing the cancellous tissue, which is very light and spongy in texture. Both bones exhibit carious ulceration of the surface.

ULCERATION OF THE CANCELLOUS TISSUE.

413. A section of the lower end of a Femur, exhibiting extensive carious ulceration of the condyle, with the formation of new bone on the adjacent part of the shaft. There are large cavities in the cancellous tissue, and the compact tissue is rarefied.

414. The upper half of a Tibia. The articular surfaces have been destroyed by ulceration, and the head of the bone enlarged and riddled by large cavities. A considerable amount of spongy and porous new bone has been formed upon the surface.

INFLAMMATION OF EPIPHYSES.

415. The upper end of the Femur of a boy. The epiphysial cartilage between the head of the bone and great trochanter and shaft has been destroyed by ulceration; the articular cartilage and ligamentum teres are unaffected. The compact tissue of the neck of the bone is eroded. The great trochanter still consists chiefly of cartilage.

From a boy, aged 6, admitted with a swelling, probably an abscess, of the upper and outer part of the left thigh, immediately below the great trochanter. After incision of the abscess and prolonged discharge of the wound, an exploration disclosed disease of the epiphysial line. Excision was performed, and the boy made a good recovery.

Presented by Henry Morris, Esq.

NECROSIS.

PROCESS OF NECROSIS OF BONE.

SEPARATION OF THE PERIOSTEUM.

416. A Sternum with a portion of the integument covering its centre. At the level of the third rib the sternum is completely separated into two fragments along one of the natural junctions. One and a half inches of the lower portions, and half an inch of the upper are necrosed, denuded of periosteum, and of a dark colour. The sac of a large abscess is seen behind the sternum, between the bone and its aponeurosis, part of which has been turned down. Perforating the integument in front is a fistulous opening which leads through the sternum into the abscess.

The patient was a youth, aged 18, who died in the London Fever Hospital 12th December, 1863, after an illness of thirty days, which in its commencement bore a close resemblance to typhoid fever, but afterwards declared itself as pyæmia, with acute necrosis of the ilium, sternum, and acromion process. During life a fluctuating tumour with distinct pulsation was present for a time over the middle of the sternum; this was punctured with a trochar.

Reported in *Path. Soc. Trans.*, vol. xv, p. 181.

See Nos. 357, 449, 450.

Presented by Dr. Murchison, F.R.S.

417.

418.

SURROUNDING FORMATION OF NEW BONE.

419. A portion of a Tibia and Fibula, showing the formation of a sheath of new bone around a part of the shaft which has become necrosed. The old shaft of the tibia, white and necrosed, is visible through a hole in its covering. The fibula at the same level is completely covered by porous new bone.

420. The shaft and lower end of a Femur. The surface of the shaft, especially above, is encrusted by outgrowths of new bone. Through a cloaca on the anterior surface, three inches above the lower end, the sequestrum, which occupies the interior of the bone, is visible. The upper end of the bone is rarefied and carious. The lower epiphysis is ununited.

421.

422.

FORMATION OF THE GROOVE OF SEPARATION.

423. The upper part of a Femur, amputated through the middle of the shaft. The sawn end of the bone has perished, a shallow irregular groove has formed around the limits of the dead bone, and some new osseous substance has been deposited upon the contiguous living bone. These changes illustrate a part of the process of exfoliation of necrosed bone.

424. The upper part of a Femur, amputated in the middle of the shaft, showing changes similar to those of the last specimen.

425. The roof of a Skull, showing commencing necrosis of the outer table of the frontal bone, and ulceration of the inner table. The sequestrum is seen in process of separation, a well marked groove has formed around it. It is whiter than the surrounding bone. Two smaller areas present similar appearances in a still earlier stage.

426.

FORMATION OF CAVITIES CONTAINING SEQUESTRA.

427. A Femur, exhibiting necrosis of the greater portion of the shaft, with formation of an incomplete sheath of new bone around the necrosed portion. The head and adjacent part of the shaft are but little affected. Below this point there is a circular aperture leading to a sequestrum, and about the centre of the new shaft a large sequestrum is seen projecting through a separate imperfect sheath of porous new bone. The lower third of the bone has completely exfoliated, and the shaft is here formed only by two bars of new bone, one in front and one behind. The epiphyses of the trochanters have not united to the shaft.

428. A longitudinal section of a Tibia and Astragalus. The upper part of the bone with its epiphysis is healthy, but from within four inches of the head downwards to its lower end it is enlarged and encrusted with new bone. Along the skin there are three apertures, round, with smooth edges, each about half an inch in diameter, leading into a cavity in the bone four inches in length, containing a loose sequestrum, consisting of a portion of the compact layer of the shaft. A piece of this has been removed from the cavity, and lies at the bottom of the bottle. Opposite this cavity the cancellous structure of the bone is seen to be consolidated. There is a sinus communicating with the lower end of the tibia just above the ankle joint, which is anchylosed both by the deposition between the astragalus and tibia and by the growth of new bone external to the joint.

From a youth, aged 16, who died in the Hospital in 1844 from tuberculosis of the lungs and psoas abscess depending on caries of the ilium. The disease in the tibia had existed for two or three years.

429.

430. Part of the shaft of a Humerus, which has undergone necrosis. A large amount of new bone has been formed, partly replacing the original shaft. This is deficient at the lower end where there is a large wide mouthed cloaca communicating by a sinus with another two inches above it. The sequestrum has been removed.

431. A section of a portion of a right Femur, showing the results of ostitis. There has been a considerable amount of new bone formed beneath the periosteum, which is in places stripped off. The cancellous tissue and medullary canal are filled with inflammatory products, and in the centre of the latter there is a cavity the size of a hazel nut, containing a sequestrum, opening externally through a long sinus.

From a man, who died in the Hospital, 5th February, 1852, of gangrenous erysipelas of the left leg. The disease in the right femur had existed four years.

432. The lower half of a Tibia and Fibula. The tibia is increased to twice its natural thickness, by a layer of granular porous new bone formed on its surface. In its interior is a cavity containing a long sequestrum consisting of the greater part of the original shaft, this central cavity communicates with the external surface by numerous large round holes. New bone has also been deposited on the surface of the fibula. There has been a fracture across the lower end of the fibula and partly across the tibia; the former has united, the lower fragment being displaced backwards. The union between the fragments of the tibia is not yet complete.

433. A left Femur and part of the Innominate Bone from a young subject. The acetabulum is much enlarged, carious, and its rim encrusted with new bone. Anchylosed to it is the detached epiphysis of the head of the femur. The remaining parts of the head, the neck and trochanters of the femur, which are extensively destroyed by caries, were excised. The shaft of the femur contains in its centre a large sequestrum, and is thickly encrusted by new bone.

434.

SEPARATION OF THE BONE (Sequestra).

435. A portion of the shaft of a Femur, forming a sequestrum six inches in length. It protruded through the skin on the outer side of the leg just below the knee, and was removed.

From a young woman, under the care of Mr. Flower, who had suffered many years from necrosis.

436. A Sequestrum from the shaft of a long bone.

437. A piece of the shaft of a Femur five inches in length, comprising the whole thickness of the bone, which separated after amputation.

438. A portion of the lower end of a Tibia, four inches in length, which exfoliated after amputation of the foot for senile gangrene.

Presented by W. S. Sibley, Esq.

439. A piece of smooth, white, necrosed Bone, five inches in length, forming nearly the whole thickness of a child's tibia.

Presented by A. Shaw, Esq.

440. A Sequestrum, seven inches long, consisting of a portion of the shaft of a humerus.

441. A ring of necrosed Bone, which separated from the tibia eighty days after the operation of trephining had been performed for an abscess in the bone.

442. The margins and part of the wall of a right Orbit, with the nasal bone, which exfoliated after the application of chloride of zinc paste.

See Nos. 33 and 636.

443. Portions of a Parietal Bone, exfoliated after application of chloride of zinc paste for rodent cancer.

444. Almost the entire wall of the left Orbit, which exfoliated in one piece after the application of chloride of zinc paste.

From a woman, aged 48, who had a scirrhous tumour of the left orbit of nine months' duration, also scirrhous nodules in the skin over the parotid gland. The eye and the tumour were excised by Mr. G. Lawson in February, 1866, and chloride of zinc paste applied. The exfoliation took place three months afterwards. The patient made a good recovery, and still continues well (1883).

Reported in *Path. Soc. Trans.*, vol. xviii, p. 233.

Presented by George Lawson, Esq.

445. Portion of the margin and walls of the Orbit, which exfoliated after the application of chloride of zinc paste. From a case of rodent cancer.

The patient made a good recovery.

446. Two small pieces of Bone, the larger one consisting of the right half of the body of the hyoid bone, the smaller of one of the cornua.

These were coughed up by a young woman, aged 35, who for three years had suffered from sore throat and aphonia. There was no history of syphilitic infection. She recovered and regained her voice.

Presented by Dr. Murchison, F.R.S.

See *Path. Soc. Trans.*, vol. xv, p. 48.

447.

448.

NECROSIS OF THE ENTIRE SHAFT OR THE GREATER PORTION OF A BONE.

449. The left half of a vertical section through the lower part of a left Leg, showing necrosis of the greater part of the shaft of the tibia. In the skin of the inner side of the leg are the openings of five sinuses surrounded with fungous granulations; through one of these a glass rod has been passed, emerging beneath the periosteum, which is there much thickened from inflammation, and separated from the underlying necrosed bone. The cancellous tissue of the head of the tibia, including the upper epiphysis, is riddled with pus-containing cavities which communicate with each other, and also with the knee joint by a sinus near the centre of the articular surface, through which a glass rod has been passed. The corresponding surface of the internal condyle of the femur is ulcerated, and the crucial ligaments partly destroyed. There are similar changes in the cancellous tissue of the lower end of the tibia, but the epiphysis is not involved. The bones of the foot are healthy.

From a boy, æt. 14, transferred on 10th December, 1884, from a medical ward into which he had been admitted three days previously, under the impression that he had acute rheumatism. The limb was fitted in a splint, and free incisions down to the bone were made. In spite of this the inflammation extended. By the middle of January the knee joint was evidently implicated, and his strength failing, amputation was performed on 1st February. He made a good recovery. The local treatment throughout was antiseptic.

From Mr. Hulke's *Case Book*, vol. lxxxv, p. 43.

450. The lower end of a right Femur and Tibia. There is a cavity in the centre of the cancellous structure of the lower end of the femur, lined by a smooth membrane, containing a sequestrum. The whole of the femur is surrounded by new bone, formed beneath the periosteum, enclosing the necrosed shaft. The tibia is necrosed for nearly four inches of its length, and almost its entire circumference; the dead portion is not yet separated. A sinuous canal leads up through the cancellous structure into the knee joint. The cartilages and bony surface of the articular end of the tibia are much ulcerated, and on the inner side quite destroyed. There is a considerable deposition of new bone around the necrosed portion.

From a boy, aged 11, who was attacked with acute inflammation of the tibia after sleeping on a damp floor. He was admitted on 31st January, 1844, nine days after the commencement of the attack. Free incisions were at once made, and a large quantity of pus evacuated. The thigh was amputated on 22nd April, and, notwithstanding a severe attack of erysipelas, which caused extensive sloughing of the flaps, scrotum, and penis, and exfoliation of the end of the femur, he made a good recovery.

451. A Tibia, exhibiting necrosis of almost the whole of the shaft. A large amount of porous new bone has been formed around the necrosed shaft, portions of which, extensively ulcerated, are seen on the inner surface, where the new bone is wanting. The head of the bone has also been almost completely destroyed by ulceration, and new bone has been formed around it.

452. The Patella of a young subject, with its ligament. The bone is necrosed and almost completely detached.

453. 454.

455. 456.

NECROSIS OF THE SUPERFICIAL OR COMPACT LAYER.

457. A section of a Femur, which has undergone necrosis of its shaft. The middle of the shaft shows that as the result of inflammation a thin layer of smooth new bone has formed on the surface of the compact layer, which is also itself thickened. Large rough masses of porous new bone have formed about the necrosed portion below, but none is seen on the surface where necrosis is complete. The cancellous tissue is partly separated from the necrosed portion of the compact layer.

From a boy, aged 15, who died in the Hospital, 13th October, 1859, of acute rheumatism and pericarditis (? pyæmia). He suffered also from strumous disease of knee joint.

458. The lower part of a Femur, showing necrosis of a part of the compact layer of the shaft. A considerable deposit of new bone has been formed around the limits of the dead bone in longitudinal lines and irregular nodules. The epiphysis has not united to the shaft.

Presented by Dr. Seth Thompson.

459.

NECROSIS OF THE CANCELLOUS TISSUE.

460. The lower half of the right Tibia and Fibula. A considerable part of the lower end of the tibia, especially of the compact wall, has ulcerated away. The cancellous interior and the articulating surfaces are necrosed, and are partly covered by light spongy remains of the wall of the bone thinly encrusted with new bone. The inner malleolus is detached and carious. The lower end of the fibula is carious, and the articular surface of the astragalus has in front been destroyed by ulceration.

From a man, aged 47, whose leg was amputated in the Hospital in 1845. Seven years previously a piece of wood had fallen on his shin, and he had had sinuses ever since. Although suffering from phthisis at both apices, he made a good recovery.

461. The lower half of a left Tibia and Fibula with the Astragalus and Os Calcis. In the lower end of the tibia there is seen a cavity containing a loose sequestrum formed by a portion of the cancellous tissue. The various articular surfaces are ulcerated and carious.

462. Four irregular pieces of necrosed cancellous bone removed by operation from the crest of the ilium.

463.

NECROSIS THE RESULT OF ULCERS OF THE INTEGUMENTS.

464.

465.

NECROSIS OF THE MAXILLARY BONES FROM PHOSPHORUS.

466.

NECROSIS OF PARTICULAR BONES.

467. The lower part of a Tibia, showing the effects of inflammation in the expansion and rarefaction of the walls, and also of necrosis of the lower third of the shaft, with the formation of masses of light spongy and porous new bone around sequestra, which are enclosed in irregular cavities. The middle portion of the shaft preserved is only slightly affected; in the upper portion there is a cavity containing a sequestrum, around which much new bone has been formed.

468. A section of the upper part of a Femur, which has been affected with necrosis. A considerable amount of new bone has been formed, and has become indurated. Two oval cloacæ, like owl's eyes, lead to a cavity in the shaft which contained a sequestrum.

469. A Sequestrum, three inches in length and one and a half in depth, consisting of part of the alveolar process of the lower jaw, which exfoliated spontaneously.

From a girl, who suffered also from extensive necrosis of the upper jaw and elbow joint. She died ultimately of tubercular disease of the brain.

Presented by George Lawson, Esq.

RICKETS.

IN ANIMALS.

470. Two Dorsal Vertebræ, from a nearly full-grown Lion, longitudinally bisected. The specimen shows considerable overgrowth of the fibrous tissue of

the intervertebral dises, and between tho centra and the eomplemental plates of the vertebræ. This new tissue bulged into the neural eanal, nipped the spinal eord, and gave rise to paraplegia.

This lion lived in the Zoological Gardens, Regent's Park, and was killed on aecount of paralysis of tho hinder portion of its body.

Presented by J. B. Sutton, Esq.

471. A Femur of a Monkey, longitudinally biseeted. The bone is softer than natural, and at the varions epiphyses displays a large quantity of translueent gelatinous tissue, most abundant at the lower epiphysial line.

From a young baboon, the subjeet of riekets.

Presented by J. B. Sutton, Esq.

472. The Skull of a Sloth Bear, longitudinally biseeted, macerated and dried. The skull, whieh is somewhat thickened, presents a mortary worm-eaten appearance. When reeent this skull was so soft that it was divided by a knife.

The animal was a few months old, and affeeted severely with riekets. The ereature's hind limbs were so paralysed that it was neeessary to kill it.

Presented by J. B. Sutton, Esq.

473. The Skull of a young Orang, affected with rickets. The specimen is remarkably light. The bones of the skull vault present a worm-eaten appearance; the texture of the remaining bones is light, friable, and porous now that the speeimen is dry. In the reeent state the bones were soft, and easily eut with a knife. The condyles of the lower jaw presented ricketty ehanges, similar to those seen at the epiphyses of a long bone affeeted with rickets, and have disappeared during the preparation of the speeimen.

The skeleton generally presented unmistakable signs of riekets. The age of the animal, as near as eould be estimated, was two years.

Presented by J. B. Sutton, Esq.

474. Skeleton of a Monkey affected with rickets. The speeimen shows beading of the ribs and flattening of the thorax. The spine presents a well-marked kyphotic eurve, so that the symphysis pubis and xiphoid eartilage tend to approach much nearer eaeh other than is normal. The boncs arc soft, and may readily be eut with a knife. The left femur has been eut near the condyles to show thc enlargement of the epiphysial line. The base of the skull shows two tabetie pateles, one on either side of the foramen magnum.

Presented by Bernard Lawson, Esq., 1883.

475. Skeleton of a small earnivorous animal, the Cynictis, aged four months, affeeted with riekets. The ribs at their junetion with the eostal eartilages arc somewhat beaded. The boncs of the skeleton are generally softened. Tho bones of the hind limbs are much larger than usual, and are as soft as gutta percha.

The animal was born in the Zoologieal Gardens, Regent's Park, 1883.

Presented by J. B. Sutton, Esq.

476. 477.

478.

IN MAN.

479. A section through the upper part of a Humerus. The head of the bone is composed chiefly of cartilage, with its ossific nucleus clearly visible. The epiphysis is separated from the shaft by a thick layer of translucent gelatinous tissue.

From a boy, aged 5 years, the subject of well-marked rickets.

Presented by J. B. Sutton, Esq.

480. A section through the condyles of the Femur, and the adjoining portion of the shaft. The nucleus for the lower end of the bone is of considerable size. The epiphysis is separated from the diaphysis by a wide layer of translucent gelatinous tissue. An isolated nodule of this spongy substance is clearly visible some little distance above the epiphysial line, forming a distinct "islet" in the cancellous tissue of the bone. The same jar contains the ends of some ribs at the junction with the costal cartilages, showing the "beadings" so characteristic of rickets.

From the same case as the preceding specimen.

Presented by J. B. Sutton, Esq.

481. The Skeleton of an adult woman, showing marked deformities of the pelvis and lower limbs, consequent on rickets. The sternum is arched, and the antero-posterior diameter of the chest increased, and there is a slight lateral curve in the spine, with the convexity to the left, involving the lower dorsal and lumbar vertebræ. These changes are probably the result of the condition of the legs. The antero-posterior diameter of the pelvis is diminished, and the alæ of the ilia expanded. Both femora are much bowed outwards, the bones flattened and the necks at right angles to the shafts. The right femur has apparently been fractured in the upper third of the shaft; union has taken place with considerable shortening and eversion of the limb. The tibiæ and fibulæ are strongly curved in an antero-posterior direction, flattened and expanded from side to side. The left foot is pointing backwards, and to the left side, behind the normal position of the right heel.

Vide No. 493.

482. The Spinal Column, five Ribs of the left side, and the Femora of a female, the subject of rickets. The vertebral column is affected with lateral curvature. The primary curve is in the upper dorsal region to the right, the body of the fifth dorsal vertebra being the most prominent; below this there is a gradual curve to the left, as far as the twelfth dorsal vertebra, and from this point the curve returns to the middle line at the fourth lumbar vertebra.

483. Longitudinal sections of a Femur, Tibia, and Fibula affected with rickets. The neck of the femur is less oblique than usual, and the head is very large; the shaft is much curved forwards and inwards; the lower articular surface is broad and flat. The shafts of the tibia and fibula, which are much curved forwards and inwards, are broad and flat.

484.

FŒTAL CRETINISM(?) FŒTAL RICKETS(?)

485. A human Fœtus, one half of which has been dissected to show the skeleton, the other left intact to show the external characters.

A detailed account of this specimen will be found in the *Path. Soc. Trans.*, vol. xxxv.

Presented by J. B. Sutton, Esq.

486.

MOLLITIES OSSIUM.

IN ANIMALS.

487. The Skull, Scapula, Pelvis, and Femur, macerated and dried, of a carnivorous animal, the Racoon-like dog. The bones are as light as cork, porous, rarefied, and of delicate spongy texture.

The animal was full grown. The disease, which in its nature has certain relations to osteomalacia, is fully discussed in the *Path. Soc. Trans.*, vol. xxxv, and *Journal of Anatomy*, July, 1884.

Presented by J. B. Sutton, Esq.

IN MAN.

488. The Lumbar Vertebræ and Pelvis. The latter presents the deformity characteristic of mollities ossium, the bones however instead of being thin and light are of extraordinary density and weight. The cavity of the brim is much contracted by the pressure inwards of the acetabula and consequent projection and folding together of the pubic bones. The left acetabulum is enormously enlarged, and appears to have separated into its primitive elements, a large opening leading from it into the pelvic cavity. The apparent separations are however fractures through the base of the cup. On the right side a fracture is seen passing through the horizontal ramus of the pubis, and a false joint has formed at the spot; the horizontal pubic rami are enormously expanded up to the sites of fracture. The lesser ascending rami of the ischia are also fractured just in front of the tuberosities. All the bones are rough, tuberculated, and expanded to an extraordinary degree. The bodies of the vertebræ are also roughened and enlarged. The sacrum appears to have been pushed downwards, and is much curved backwards. The transverse processes of the four lower sacral vertebræ are inclined upwards. It appears that subsequent to the development of the state of mollities a new formation of bone must have taken place.

489. A Pelvis, showing the deformity characteristic of mollities ossium. The cavity of the brim is heart-shaped from the pressure inwards of the acetabula and consequent projection and folding together of the pubic bones. The obliquity of the pelvis is lost. The upper part of the sacrum is directed backward, the lower half and coccyx are sharply curved forwards. The iliac crests are broad and thick, whilst the fossæ are hollowed out posteriorly so thin as easily to transmit light. The ilia at the sacro-iliac synchondroses are much thickened. The bone above and around the acetabula is covered with nodules of new osseous growth. The conjugate diameter is four and a half inches, the oblique four and three-quarter inches; the transverse four and three-quarter inches; between the anterior iliac spines seven and a half inches.

From a woman, who died after Cæsarean section.

490.

SYPHILITIC DISEASES OF BONES.

OSTEOPLASTIC OSTEITIS AND PERIOSTITIS.

491. A left Femur and Tibia and the Bones of the right arm from the same case, exhibiting changes the result of syphilis. On the surface of the femur there is a very thin and finely porous layer of new bone. The shaft of the tibia is much thickened and rounded from a similar but more extensive deposit, which

has undergone superficial ulceration in several places. On the posterior aspect of the head of the humerus the articular cartilage is destroyed over an area the size of a halfpenny, and the cancellous tissue exhibits superficial ulceration. The posterior aspect of the lower half of the shaft is covered with a deposit of finely porous new bone, forming a distinct node at one spot. The trochlea surface is ulcerated. The upper end of the ulna is much thickened and the radius also throughout its whole length. A deep ulcer, in the centre of which is a layer of the compact tissue undergoing necrosis, is seen on the posterior aspect of the latter bone three inches above its lower end.

492. A Skeleton of a young female, showing the effects of syphilis. The frontal bone is extensively ulcerated and perforated in one spot. There is a large ulcer in the right supra-orbital ridge, and a smaller one at the corresponding spot on the left. The ribs and vertebræ are normal, except that the bodies of the latter present numerous holes for vessels. There are some patches of ulceration along the vetebral border of the left scapula and over the acromion process. The left humerus is normal. The ulna is much enlarged below the acromion process, very irregular and thickly covered with new bone, except the lower end, which is atrophied and distorted. The radius is fixed in a position of extreme pronation. There has been a deposit of new bone around the bicipital tubercle, but the central portion of the shaft is unaffected. The lower end for an inch and a half is much expanded, and presents a carious surface with many ulcerated cavities, one of which, of large size, occupies the epiphysis. The spine of the right scapula is tuberculated about its lower end, and the tip of the acromion process has been destroyed by ulceration. There is a large node on the posterior surface of the middle of the shaft of the humerus, and the lower third of the bone is expanded, deeply ulcerated, and covered with a new growth of bone. The olecranon process of the right radius has been destroyed by ulceration, and the whole bone is much thickened, tuberculated, and ulcerated at the lower end. The right radius presents appearances almost exactly similar to those of the left. The upper articular surface of the lunar bone is ulcerated. The pelvis shows no marked changes. The left femur is also normal, except the lower epiphysis, which is deeply grooved for vessels, and irregular on the surface from a growth of new bone. The articular cartilage is ulcerated. The patella is normal. The left tibia is enormously thickened, rounded, and covered with new bone, which is deeply ulcerated about the attachment of the ligamentum patellæ and over the greater part of the lower half of the shaft. The fibula is expanded at its lower end, but is not otherwise changed. The right femur presents a very large and prominent node on the outer aspect of the lower third of the shaft, and the outer condyle and epiphysis are very deeply ulcerated. The right tibia is much less affected than the left; it is thickened in the upper half, but almost normal below. The upper half of the fibula is also expanded, the lower being normal. Both feet are small and normal; some of the epiphyses of the long bones have united with the shaft.

493. The Skeleton of an old man, showing the effects of syphilis and rickets. The outer table of the frontal and parietal bones presents a very irregular pitted surface from the effects of deep ulceration, which has in some places perforated the inner table also. The edges of the ulcers are rounded and the surface smooth. The jaws are edentulous and atrophied. The cervical and upper half of the dorsal spines are partly anchylosed by bridges of new bone overlapping the intervertebral discs. In the middle and lower dorsal regions anchylosis is complete, the bridges of new bone appearing as nodules the size of a horse chestnut. Similar bony growths are seen between the lumbar

vertebræ, but anchylosis does not appear to have been complete. Some of the ribs present a finely porous appearance; several of the costal cartilages are missing. The wings of the ilium are expanded, the inlet of the pelvis is reniform from the projection forwards of the lumbar vertebræ and upper end of the sacrum (conjugate diameter two inches; transverse four inches). The curve of the latter is wide. The femora, tibiæ, and fibulæ present the typical curves of rickets. The neck of each thigh bone is horizontal, and the shaft is curved forwards and outwards, the right being distinctly nodular along its outer aspect.

494.

495.

SYPHILITIC OSTEITIS AND CARIES.

496. A Calvaria, much thickened from a growth of new bone, chiefly on the outer surface of the parietal bones. The inter-parietal and frontal-parietal sutures are almost obliterated, and the bone is dense and heavy. A little in front of the apex of the occipital bone there is a triangular ulcer destroying the outer table, and over the left parietal eminence there is another similar, but smaller ulcer; both have for the most part smooth healed margins.

Vide Series No. III, No. 157, and Series V, No. 355.

Presented by J. B. Sutton, Esq.

497. A Skull, showing extensive changes the result of syphilitic disease. The frontal, parietal, and occipital bones are pitted and irregularly excavated by ulceration, and present generally a worm-eaten appearance; much new bone has been formed on the outer surface. The ulceration has extended through both tables about the superciliary ridge of the left frontal bone. The temporal, nasal, malar, and superior maxillary bones exhibit similar changes in a less advanced degree.

498. The roof of a Skull, showing extensive ulceration and formation of new bone on the outer table, with perforation of both tables just below the left parietal eminence. The inner table presents a finely worm-eaten appearance, and an irregular ulcer is seen on the right parietal bone at a spot nearly corresponding with the perforation on the opposite side. A section through the left frontal bone shows that both tables are much thickened, and that the diploë is filled with an osseous deposit.

499. The roof of a Skull. The external table on the right side is marked by a rough oval ulcer five inches long and three broad. It is slightly depressed beneath the level of the vault of the skull, and deeply so at the coronal suture, which it crosses. The margin of the ulcer is bevelled and radiated, the surface porous, but here and there becoming smooth. The orifices for vessels on the inner table corresponding to the ulcer are numerous and large. The whole skull is somewhat thicker and heavier than normal. The ulcer, which is nearly healed, was probably the result of syphilis.

500. The roof of a Skull, exhibiting extensive ulceration of the frontal and parietal bones on the left side, and three healed ulcers in corresponding situations on the right side. Both tables are thickened from the formation of new bone. The inner table has been perforated in three places corresponding to external disease, the ulcers being surrounded by reticulate looking bone grooved for many new vessels.

501. A portion of a Skull Cap, showing numerous small irregular ulcers of the outer table of the frontal bone, probably the result of syphilitic disease. On the part of the inner table corresponding to the ulcer there are numerous grooves for vessels.

502. The roof of a Skull, showing a deep ulcer of the outer table and diplöe, perforating the inner table also at the apex of the occipital bone. New bone has been formed on the outer table over the greater part of the vault. On the frontal bone an irregular depression surrounded by new bone marks the site of a healed ulcer. The inner table about the posterior superior angles of the parietals and adjacent parts of the occipital bones presents a worm-eaten appearance from ulceration.

503. A Skull Cup, showing a nearly healed ulcer of the outer table over the right parietal eminence, and other ulcers also healing about the corresponding spot on the opposite side. New bone of a finely porous texture has been formed on both tables of the frontal, parietal, and occipital bones; the section of the latter shows it to be considerably thickened.

504. A Skull Cap, showing an ulcer of the frontal bone above the right external angular process, the effect of syphilis. The edges of the ulcer are smooth and rounded; both tables are perforated, and new bone has formed on both surfaces. There are indications of a groove on the inner table.

505. A longitudinal section of a Tibia, exhibiting various changes, the result of chronic inflammation, probably of syphilitic origin. The surface of the shaft is extremely irregular from the formation of porous new bone and from ulceration and necrosis of the compact layer. Several openings communicate with the cancellous tissue, which shows rarefaction. At the junction of the middle and lower third there is a deep depression, part of a sinus perforating the bone. At this point the medullary canal is obliterated. The astragalus is firmly anchylosed to the tibia, the line of union being almost obliterated.

506. 507.

508.

SYPHILITIC NECROSIS.

509. The lower half of a right Tibia, of which a portion of the posterior part of the shaft is necrosed and partially separated from the surrounding living bone by a groove of ulceration. There is considerable formation of new bone on the surrounding surface. The disease is probably the result of syphilis.

510. The roof of a Skull, of which the greater part of the right parietal and right half of the frontal bone has been destroyed by necrosis. Two bony plates completely separated are attached to the specimen. The bones show numerous perforations and extensive ulceration of the inner table. The parts of the outer table between the perforations are but little affected.

511. The roof of a Skull, showing very extensive ulceration, with necrosis of the parietal bones. Both tables are perforated over an irregular area about the size of a shilling just in front of the posterior superior angle of the right parietal bone. The outer table is eroded for some distance around the perforation. Some necrosed fragments are still attached in the ulcerated area. The inner table is also worm-eaten and grooved for numerous new vessels.

512. A portion of a Skull Cap, measuring five inches by four inches, which has separated as a sequestrum. It is perforated in many places, and has a rough surface and an irregular indented margin. The inner table, which is very porous, is only complete about the centre of the specimen.

513. A similar specimen.

514. 515.

516.

CHANGES IN BONES DUE TO CONGENITAL SYPHILIS.

517.

518.

MISCELLANEOUS SPECIMENS.

519. The roof of a Skull. The anterior part of the left parietal bone is hollowed out on its internal surface; one fossa reaches nearly through the bone, others have extended through and coalescing formed an opening two inches long and one broad, with rounded edges not unlike what would have been produced by the trephine. A considerable quantity of new bone lines the internal table especially around the fossa. The diplöe is obliterated and the calvarium very dense and heavy. These changes probably resulted from the growth of a tumour which pressed upon the part which has been absorbed.

520. 521.

522.

TUMOURS OF BONES.

OSSEOUS TUMOURS (OSTEOMATA).

EXOSTOSES (Circumscribed Osteomata).

523. A portion of a Frontal Bone, exhibiting two large nodular bosses of new bone on the inner surface, corresponding to the centres of ossification. The elevations subside towards the margins of the bone, but the frontal suture is obliterated, and the coronal suture also upon the internal surface. The grooves for the meningeal vessels are deep, and at the sawn edge are nearly converted into tunnels. The bone is very heavy.

524. The last Phalanx of a Great Toe, with an exostosis growing beneath the nail.

Presented by C. H. Moore, Esq., 10th December, 1862.

525. An ivory Exostosis removed from the mastoid process of a girl aged 20.

526. Sections of a bony Exostosis.

Presented by C. De Morgan, Esq., 1863.

527. Exostosis of the Femur removed by operation.

Presented by Mitchell Henry, Esq., July, 1861.

528. A left Femur. The shaft is much arched and the linea aspera projects inwards. The line leading from the linea aspera to the internal condyle is lost in a long prominent ridge of bone which rises to the height of nearly an inch in almost the whole length of the line. The head of this exostosis is sharp, its base continuous with the normal bone, and half an inch in breadth. There are two minor projections in its neighbourhood.

529.

DIFFUSED OSSEOUS GROWTHS.

530. A transverse slice from the middle of a left Fibula macerated and dried. The shaft of the fibula is much expanded; it presents on its anterior and outer surface a thin shell, which was highly vascular, enclosing a very open cancellous structure. From the posterior and internal surface springs, by a narrow neck, a large osseous tumour, the transverse section of which measures in one diameter five and a-half inches, and in another four and three-quarter inches. The greater part of it is made up of dense ivory-like bone, with here and there an extremely delicate cancellous structure. Numerous vascular canals ramify through it, a very large one is seen a little internal to and behind the fibula.

The microscopical characters are those of true bone tissue, traversed in every direction by large branching and communicating vascular canals at the point of confluence, of which there is often a sort of ampulla; in some cases a large canal terminates in a bulbous extremity, from which a radiating pencil of tubes is given off. Finer canals are also given off from the larger ones. The bone tissue presents an indistinct lamination, for the most part parallel to the canals. The lacunæ are small, very numerous and elongated. Very few true Haversian systems are to be seen. The cancellated tissue presents the ordinary characters.

For a cast of the skull and drawings, see Series XLII, No. 107, and XLIII, Nos. 4 and 5.

From a man, aged 34, who died in 1857, under the care of Mr. Bickersteth, of Liverpool. The disease began to show itself at the age of 14, appearing first in the face.

The cranial and facial bones, except the occipital and the inferior maxilla and hyoid bone, were extraordinarily distorted by similar outgrowths.

Vide *Path. Soc. Trans.*, vol. xvii, p. 243.

531.

CARTILAGINOUS TUMOURS (ENCHONDROMATA).

532. A vertical section of the upper part of a Tibia, showing an enormous enchrondromatous tumour springing from its posterior aspect. The tumour contains many cysts filled with gluey and gelatinous matter, containing remnants of cells from the softened cartilage.

From a woman, aged 28, admitted into the Hospital under the care of Mr. De Morgan, November, 1873. A swelling in the calf of the leg was noticed in 1871, seven weeks after her first confinement. The swelling subsided in a few weeks, but returned accompanied by pain in four months. It remained stationary until her second confinement in October, 1872; it increased until March, 1873, and again in August rapidly increased. The tumour extended from the ankle to the popliteal space. Amputation was performed at lower part of thigh.

Reported in *Path. Soc. Trans.*, vol. xxv, p. 209. In the report the word "lower" has been erroneously put for "upper" part of tibia.

Presented by Mr. C. De Morgan, Esq.

533. Section of the Bones of a Finger. Springing from the under and outer surface of the second phalanx is an enchondromatous tumour the size of a walnut.

534. 535.

536.

CALCIFYING OR OSSIFYING CARTILAGINOUS TUMOURS.

537. An irregularly shaped mass of light and very porous new bone, which formed the ossified portion of an enchondroma, growing from and expanding the lower end of a Radius. The articular surface can be seen in the upper part of the specimen, and below it is a deep pit in which the lower end of the ulna lodged. The bone shows several deep and smooth grooves.

From a man, about 45 years of age, an epileptic, who met his death from a fracture of the spine, caused by a fall from a ladder. The tumour had been growing seven years. He was able, notwithstanding its presence, to carry on his work as a bricklayer.

Presented by J. B. Sutton, Esq.

538.

MYXOMATA.

539. The left half of a vertical section of the face and base of the Skull. Occupying the nasal fossa, and expanding and separating the bones of the face is a large myxomatous tumour, which appeared to have originated within the septum of the nose. It is incorporated with the frontal nasal, and, as may be seen in the next preparation, with the superior maxillary bone, and with the base of the cranium from the lower part of the body and right internal pterygoid process of the sphenoid forwards. The crista galli is involved, but not the cribriform plate or air cells of the ethmoid. The orbits are much encroached upon. The tumour in the recent state consisted of a framework composed partly of spongy bone and partly of a delicate fibrous stroma enclosing cavities filled with a transparent glairy viscid fluid, having the character of mucin.

From a man, aged 22, who died during the performance of an operation for the removal of the tumour (1864). The tumour began to grow in 1857, after an injury to the nose from a fall on the ice.

Reported in *Path. Soc. Trans.*, vol. xix, p. 332, where will be found drawings and an account of the microscopical structure.

Presented by C. H. Moore, Esq.

540. The other half of the Skull of the preceding case, macerated so as to show the bony stroma of the tumour and its attachments. A macerated slice is shown under the same glass.

FIBROUS TUMOURS.

541. The right half of a longitudinal section of a left Femur and the Knee Joint. Growing from the posterior and inner side of the femur is an irregular shaped tumour, measuring upwards of seven inches from above downwards, and twenty-five inches in its lateral diameter. Its surface is lobulated, and the tendons and muscles of the ham are in part incorporated with it. The femoral vessels pass through its centre. On section it has a firm glistening appearance for the most part, and presents an interlacement of fibres, in part having a somewhat radiating course, in part much convoluted. The posterior portion near the surface was much softer than the rest, and presents an irregular cavity containing a partly decolorised clot of blood. The medullary canal is parly filled by a similar growth. On microscopical examination it was found to consist entirely of fibres, arranged in wavy, parallel, and interlacing bundles of fibre cells. A few elastic fibres were also present. The fibres were abundantly studded with elongated and round nuclei. Similar tumours were found in the liver and lungs, the inside of one of the right ribs, and the biceps muscle of the left arm.

From a man, aged 45, whose leg was amputated by Mr. De Morgan in July, 1854. The tumour in the thigh had been noticed two years. He died a few days after the operation from the effects of the chloroform.

Vide *Medical Times* for 1854, vol. ii, p. 86.

Reported by Mr. Sibley in *Path. Soc. Trans.*, vol. vii, p. 340.

Vide No. 629.

542.

543.

SARCOMATA.

ROUND CELLED SARCOMATA.

544. The lower end of a left Femur, showing in section a tumour the size of an orange attached to the outer condyle of the femur.

From a girl, Fanny G., aged 18, a dressmaker, who was admitted into the Hospital on 13th January, 1880, under the care of Mr. Hulke, with a hard swelling the size of a small egg at the outer condyle of the left femur, apparently connected with the tendon of the biceps femoris. It was first observed four years previously. It was thought to be a thick-walled bursa, but on dissecting it out it proved to be a thick-walled multilocular cyst. She was discharged convalescent on 26th February.

On 26th August, 1881, she was readmitted. There was then a bossy tumour about three inches across upon the outer femoral condyle firmly fixed to the bone.

There was no redness of the overlying skin or agglutination of the integment, but the surface was very tender, and the cutaneous veins were swollen. A part of the growth had the firmness of a fibroma, whilst another part was elastic and simulated fluctuation. Amputation was proposed to the patient, but was declined, and she left the Hospital; but was readmitted 18th October, and on 4th November amputation was performed, and she went home well early in January, 1882.

On microscopical examination the tumour presented the appearances of a round-celled sarcoma.

Presented by J. W. Hulke, Esq., F.R.S.

Vide No. 566.

545. The Lumbar Vertebræ and Pelvis, with the right innominate bone removed. All the pelvic bones are enormously enlarged, and form a vast sarcomatus tumour, the great mass of which springs from the inner surface of the left innominate bone and fills up the left side of the pelvis. This mass contains an irregular cavity with broken down walls; another large cyst is seen to rest against the inner surface of the pubes. The sacrum is infiltrated by the disease, but its shape is less altered. The iliac veins, the vena cava, and the right renal vein are plugged by a cylindrical mass which, on microscopic examination, was found to resemble in structure the rest of the morbid growth, viz., that of a large-celled sarcoma.

546. 547. 548.

549. 550.

SPINDLE AND MIXED ROUND AND SPINDLE-CELLED SARCOMATA.

551. The upper end of a left Tibia, with the integuments and soft parts divided longitudinally. Projecting from the head of the tibia, internally and posteriorly, is a large tumour, measuring, with the leg, nineteen inches in circumference. The surface is somewhat lobulated, the skin covering it congested, adherent and thinned, and over a prominent lobule ulcerated. The whole thickness of the bone is infiltrated by the mass. The microscopical characters are those of a spindle-celled sarcoma.

From a woman, aged 42, whose thigh was amputated 20th February, 1867. The tumour first appeared when she was 9 years old. It grew slowly till she was 24, when it had the size of a large walnut. It then remained quite stationary till she was 41. In January, 1866, she strained her knee by falling over some steps; this was followed by rapid growth of the tumour. After the amputation she continued well until February, 1868, when she became subject to severe neuralgia of various cerebral nerves. This was followed by paralysis of the right arm, dysphagia, coma, and death on 23rd March.

On post-mortem examination several sarcomata (spindle-celled) were found in the brain.

Reported in *Path. Soc. Trans.*, vol. xviii, p. 215, and vol. xix, p. 33.

Presented by T. Carr Jackson, Esq.

552. Section of the lower half of a right Femur, with the integuments and soft parts. Springing from the lower end and lower third of the shaft of the femur is a lobulated tumour nearly the size of an adult head. The compact tissue of the bone corresponding to it is eroded, and the medullary cavity and cancellous structure infiltrated. The tumour was of the consistence of soft cheese, but in some places was diffluent. It contains cysts in part filled by broken down coagula. It is of a yellowish-white colour, not encapsuled, and infiltrates the soft parts of the thigh. Microscopically it was found to be composed of spindle-shaped cells intermixed with others of various forms. Some of the pelvic and lumbar glands were enlarged, but there were no deposits in the viscera.

From a woman, aged 34, whose thigh was amputated by Mr. Nunn, 7th July, 1869. She died of pyæmia 13th July. The tumour had been noticed for three months.

Reported, with drawings, in *Path. Soc. Trans.*, vol. xxi, p. 339.

553. A section of a great Toe, showing a sarcomatous tumour the size of a Tangerine orange involving the bone.

554. A longitudinal section of the lower third of a Femur injected. The lower end and the condyles are expanded into a large tumour, which is everywhere invested externally by periosteum and on the outer side by a thin layer of bone. Within, it consists of a soft vascular sarcomatous growth, the centre of which presents an opaque yellow patch. The growth passes for about an inch into the shaft of the femur, and ends by a well defined rounded margin. The articular cartilage bounds the mass below.

From a man, aged 43, whose thigh was amputated 1st April, 1853. He made a good recovery. The knee had been weak for a year, but the tumour appeared after a fall which took place nine months previously. It was elastic and pulsated.

Presented by C. Moore, Esq.

555. A Tibia and Fibula. Growing from the lower end of the latter there is an oval tumour about five inches in length and two in depth, which the peronei muscles are spread over the surface of. On microscopical examination the tumour was found to be a spindle-celled sarcoma.

556. A vertical section through the lower part of a right Leg, showing a lobulated tumour situated deeply between the bones and around the vessels, and also forming a superficial mass with ulcerated surface above the malleolus internus. On the back of the leg a linear scar over six inches long extends from the heel upwards through the calf.

From a woman, Susan W., aged 69, a cook, who was admitted into the Hospital under the care of Mr. Hulke on 25th April, 1880. At the back of the leg, reaching from the heel halfway up the calf, there was an elastic tumour under the superficial muscles, but apparently unconnected with the bones. It was first observed six years previously, when about the size of a hen's egg. It had given rise to much pain, which was chiefly referred to the foot. Amputation was advised, but declined by the patient, so the tumour was excised. It was lobulated. The posterior tibial artery ran through it, and was divided above and below and secured by ligatures.

The posterior tibial nerve embedded in it for six inches was dissected out and saved. The wound healed slowly, and she continued in the Hospital until July.

On 6th October, in the same year, she was readmitted with a large tumour recurrent in the lower part of the seat of the original growth. It was prominent at the inner side of the leg above the malleolus internus; its surface was black, gangrenous, ulcerated, and exuded a stinking ichor.

The glands in the groin were swollen and tender. Amputation was performed with all antiseptic precautions, several vessels were tied with carbolised catgut. On the fourth day the stump was gangrenous; on the seventh there was profuse hæmorrhage, from which she died a few hours later.

Vide Case Book, vol. 101, pp. 56 and 80; also Case Book, vol. 106, p. 18.

Presented by J. W. Hulke, Esq., F.R.S.

557. A longitudinal section of the lower end of a right Femur, with a large somewhat lobulated tumour five inches in diameter surrounding the bone immediately above the condyle. It is situated beneath the periosteum, which is expanded over it. At one point close to the articular surface it encroaches somewhat on the substance of the bone. The section of the tumour shows it to be divided into indistinct lobules by curved fibrous bands. On microscopical examination it was found to present the characters of a sarcomatous growth.

From a youth, whose thigh was amputated by Mr. Moore, 3rd August, 1859.

558.

SARCOMATA CONTAINING MYELOID CELLS.

559. A right Scapula. Springing from the glenoid cavity is a lobulated tumour the size of a full grown fœtal head. The axillary vessels and nerves are seen bending round its surface. On section it is seen to be divided into lobules by fibrous bands, which radiate outwards from the lower margin of the glenoid cavity. It is in part composed of cancellous bone.

From a woman, aged 43, who died in the Hospital, December, 1857. She began to suffer from pain in the shoulder in September, 1856. In the following year a swelling appeared at the back of the joint. On 10th September Mr. Mitchell Henry amputated at the shoulder joint, the disease appearing to be confined to the humerus. The patient recovered from the operation, but after a few weeks the scapular tumour took on rapid growth. After death small myeloid tumours were found in the lungs.

Vide *Path. Soc. Trans.*, vol. ix, p. 367.

560. The upper part of a right Humerus, with the head detached. The upper part of the shaft is occupied by a firm nodulated tumour the size of a small orange. It is seen to grow from the surface of the bone, but also to infiltrate the medullary cavity and cancellous structure. The detached head of the bone consists of a shell of cartilage filled with soft vascular prolongations of the morbid growth. The external harder portions of the tumour are composed of fibro-plastic growth, the soft vascular part inside the head of the bone chiefly of gigantic myeloid cells. From the same case as the preceding.

561. A longitudinal section of the upper part of a Tibia, showing a lobulated myeloid tumour growing from the head of the bone. On section the cancellous structure of the head and its epiphysis is seen to be infiltrated by the growth.

562. The lower end of a Radius and Ulna. Growing from within the radius, which forms a thin and imperfect shell around it, is a tumour the size of an orange, grooved on the dorsal surface by the extensor tendons. The ulna is firmly attached to the tumour, partly by the pronator quadratus and partly by adhesions between the periosteum of the ulna and the capsule of the tumour. Within, the growth is composed of a brownish red, grumous-looking material, which exhibited under the microscope myeloplaques in large quantity.

From a woman, aged 28, who first noticed the growth in March, 1875, three months after receiving an injury to the wrist by falling on the hand. The tumour continued to grow, and was removed on 8th March, 1876. The patient recovered with a useful hand.

Vide *Clin. Soc. Trans.*, vol. x, p. 138, and vol. xiii, p. 155.

Presented by Henry Morris, Esq.

563.

564.

CALCIFYING OR OSSIFYING SARCOMATA.

565. The upper half of a right Tibia and Fibula. The upper end of the latter bone is expanded into a large oval tumour with lobulated surface, measuring

upwards of twelve inches in its long diameter. To the naked eye it appears to consist partly of dense ivory-like bone and partly of bone of a more spongy texture. On microscopic examination it was found to be made up of developing fibrous tissue, with, in places, abundant cell formation, the whole being infiltrated with calcareous salts.

The patient, a man, aged 22, underwent amputation of the thigh in the Hospital, August, 1869. The disease had shown itself ten months previously. He died four or five months afterwards with numerous secondary formations in various parts of the body.

Reported in *Path. Soc. Trans.*, vol. xxii, p. 214.

566. A vertical section through the bones of the Leg, which are surrounded in the lower half by a large oval growth, measuring four by seven inches. Its surface is irregularly nodulated and surrounded by a thick capsule for the most part of a firm and elastic consistence, but in some places of bony hardness. The adjacent structures were displaced but not infiltrated. The bones are completely embedded in the growth, which spreads up the medulla of each for some distance. The bones are not expanded over the growth. The growth is solid and of almost bony hardness, the peripheral portions being softer than those more deeply situated. On microscopical examination the capsule was found to consist chiefly of fibrous tissue, except at the surface in contact with the growth, where a large spindle-celled tissue prevailed. Decalcified sections of the growth itself showed a structure of rounded granular cells, embedded in a finely reticulated matrix, which was the seat of the calcareous deposit.

From a man, aged 21, who was admitted into the Middlesex Hospital, under the care of Mr. Henry Morris, 1st January, 1883.

He stated that nine months previously by the upsetting of a barrow of bricks he had sustained a severe contusion of his leg at the seat of the present growth. This was followed in a month by a swelling at the seat of injury, which during the last four months had rapidly increased in size.

Amputation through the knee-joint was performed on 3rd January. The flaps partially sloughed, and a large abscess formed on the front of the thigh beneath the rectus; this was incised, and the wound slowly healed.

Reported by Mr. W. Roger Williams in *Path. Soc. Trans.*, vol. xxxiv, p. 267.

567. 568.

569. 570.

MELANOTIC TUMOURS.

571. A portion of the wall of an Orbit, showing a lobulated tumour of a black colour springing from the orbital plate of the frontal bone, which it has perforated. The dura mater is partly involved, and also the seventh rib of the right side, which shows complete infiltration with the new growth, rendering it so soft as to be readily cut with a knife.

From a woman, aged 63, who died in the Hospital 8th February, 1872. About Christmas, 1868, she first experienced pain in the left eye and left side of the head. Three months later she lost the sight in that eye. Nothing further was noticed until April, 1871, when the tumour of the eyeball became more marked. The eyeball was excised by Mr. Lawson, at Moorfields Ophthalmic Hospital, in July of the same year. The sclerotic and part of the iris and thickened lens capsule alone remained, a black tumour replacing the other structures. There the sclerotic above was thinned and perforated. In six weeks the disease recurred in the upper and outer angle of the orbit, and she was admitted into the Hospital in January, 1872. At the post-mortem examination secondary nodules were also found in the heart, lungs, pleura, liver, kidneys, and rectus abdominis muscle.

Series XIII, No. 994, and Series XXIII, No. 1569.

Many of the lymphatic glands throughout the body were infiltrated with black pigment. The primary growth was in the choroid of the left eye. A microscopic examination showed the growth to be mainly spindle-celled.

Path. Soc. Trans., vol. xxiii, p. 251.

Presented by Andrew Clark, Esq.

572. Section of the head of a Humerus and a portion of a Skull Cap. The cancellous structure of the humerus and the diplöe of the skull are of a deep brownish-black colour from the infiltration of a melanotic growth. The normal size and shape of the bone are not altered. The surface of the humerus is also in part stained. The uterus and liver also showed melanotic infiltration.

573.

574.

CANCERS.

EPITHELIOMA.

575. A Tongue, Larynx, and the Lower Jaw, showing destruction of the greater part of the horizontal ramus on the left side, and on the right side of all the bone except the coronoid process and parts immediately adjacent, the result of the growth of epithelial cancer. The tongue is not affected.

From a man, aged 60, who died from epithelioma of the lip. There were extensive infiltrations of the glands of the neck.

576. The right half of a Lower Jaw, with a portion of the whole of the tongue. The left side of the tongue and the whole of the left half of the jaw have been destroyed by epithelial cancer. The horizontal ramus is extensively ulcerated and much diminished in depth. The teeth have disappeared.

From a man, aged 66, who died from epithelioma of the tongue, with extensive destruction of the face. There were no secondary deposits except in the cervical glands.
Vide Nos. 626, 627.

577. 578.

579. 580.

MEDULLARY CANCERS.

581. A longitudinal section of the upper end of a Tibia. The bone is enveloped in an encephaloid growth which infiltrates the cancellous structure of the head. It grows in lobules, some of which encroach upon the knee joint, and project into its cavity between the semilunar cartilages. The stroma of the mass is partially ossified.

582. A portion of an Occipital Bone, with a cancerous tumour projecting from both its surfaces. On the external surface the tumour forms a smooth oval somewhat lobulated mass, about five inches in its long diameter, corresponding to which on the internal surface is a ragged broken down growth projecting into the cranial cavity. The dura mater was perforated by the growth, and the corresponding part of the cerebellum broken down, but not infiltrated with cancer.

From a man, aged 28, who died in the Hospital 28th April, 1856, after an illness lasting two months. There was a large primary cancerous tumour of the left humerus (*vide* next specimen), and also similar tumours in the sternum, lumbar vertebræ, lungs, liver, and spleen.
Med. Reg., 1856, p. 117.

583. The lower half of a left Humerus. The bone occupies the centre of a nodulated cancerous mass which springs from its surface, and appears to have been invested by the periosteum, through which the superficial nodules project. The bone itself retains its continuity.

From the same case as No. 582.

584. The upper part of a Sternum, showing on the anterior and posterior surfaces of the bone a large lobulated encephaloid tumour, nearly equally divided by the sternum, which is infiltrated by the growth. A portion of the tumour on both aspects has been removed.

From the same case as No. 582.

585. The left half of a Skull, showing a firm nodulated tumour, the size of half an orange, projecting into the cranial cavity, with a layer of brain adherent to it. It springs from the optic foramen and sphenoidal fissure.

From a patient from whom eight months before his death Mr. De Morgan removed a large recurrent encephaloid tumour of the orbit.

Reported in *Path. Soc. Trans.*, vols. xvii and xviii., pp. 220 and 265.

586. The upper end of a Tibia, showing a soft cancerous mass invested by the periosteum, springing from the anterior and lateral surface of the bone. In front a section shows that the growth also springs from the cancellous tissue, and is divided by septa, which are partially ossified. The growth has been injected and exhibits great vascularity.

587. A portion of the anterior part of the base of a Skull, with a malignant tumour projecting into the cavity of the cranium from the orbital plate and wings of the sphenoid, and also externally into the back of the orbit; the optic nerve may be seen passing close to it. The left internal carotid artery is impervious.

588. A section of the upper end of a left Femur. The cancellous structure of the head, neck, and trochanter is infiltrated with medullary cancer, but the shape and size of the bone are not altered.

589. Longitudinal section of the lower end of a Femur. The cancellous structure of the condyles and lower part of the shaft is infiltrated with medullary cancer, which at the junction of the condyles and shaft penetrates through the compact tissue and forms a tumour which projects into the ham, and also anteriorly where it is invested by periosteum.

590. A vertical transverse section of the upper part of a Sternum, and the ends of the Clavicles and the Ribs. The sternum is infiltrated by a cancerous mass which is seen to be making its way into and between the cartilages of the ribs and the sterno-clavicular articulation. In its centre is an old blood clot.

Vide next specimen.

591. A section of the outer portion of a right Clavicle from the same patient as the preceding specimen. The continuity of the bone is interrupted by an oval lobulated cancerous tumour the size of a small apple. Its surface is in part invested by periosteum, and is divided into lobules by fibrous septa. The ends of the bone terminate abruptly at the tumour, in the interior of which a cyst half an inch in diameter is visible.

From a man, aged 65, who twelve months before his death fractured his right clavicle. A month after the injury a tumour showed itself on the top of the sternum; when first seen, three months and a half before his death, there were two tumours, one over the sternum and one on the clavicle, and here there was motion but no grating between the outer and inner halves of the bone. He suffered from severe pain in his left thigh, found to be due on post-mortem examination to a cancerous tumour on the left side of the lumbar vertebræ.

592. A section of the upper end of a Femur, the head and neck of which are infiltrated with medullary cancer. The neck is much shortened and horizontal, but the bone not otherwise altered in shape.

593. A section of the lower end of a Tibia, Astragalus, and Os Calcis, with the soft parts and integuments. Growing from the posterior surface of the tibia, commencing immediately above its lower epiphysis, is a large irregular lobulated cancerous mass, projecting with an ulcerated bleeding surface through the integuments. The growth, which is in part invested by the periosteum, extends into the cancellous tissue of the shaft. There was no enlargements of the inguinal glands.

From a boy, aged 12, whose leg Mr. De Morgan amputated 23rd March, 1860. The disease had begun to show itself fifteen months previously. He recovered, and two years afterwards was in good health.

Male Surg. Reg., vol. vii, p. 113. *Vide* No. 635.

594. A section of a left Clavicle, the sternal end of which is enlarged and the cancellous tissue replaced by a soft white mass of new growth. Also portions of the third, fourth, fifth, and sixth left ribs, which are expanded by soft oval tumours, the largest (seen in section) softening into cysts. Also a section through the great trochanter and the upper end of the shaft of the right femur, the cancellous tissue of which is converted into a soft mass breaking down into a cavity.

From a woman, aged 42 years, who was admitted into the Hospital 11th March, 1875, and died 21st March.

No other organ was affected.

See *P. M. Reg.*, vol. i (new series), No. 74.

595. A Pelvis and the Lumbar Vertebræ, with part of the arches removed on the left side, so as to expose the spinal canal. The lumbar part of the spine presents two lateral curvatures: first to the left, then to the right. The bodies of the last four lumbar vertebræ were so soft that they could easily be cut with a knife, and are much flattened, especially on the right side. The posterior part of the left ilium above the sciatic notch is expanded into a large globular cancerous tumour four inches in diameter, which also involves the adjacent part of the sacrum; its centre has softened down into a large cavity which communicates with the spinal canal through the softened sacrum; several smaller caseous nodules are seen on other parts of the ilium. On the right side on that part of the inner aspect of the pelvis which corresponds to the acetabulum is a soft globular enlargement the size of half an orange, and on the exterior, below and behind the acetabulum, is a pear-shaped mass continuous with the former one, which encroaches on the sciatic notch. The ischial tuberosity is greatly thickened by cancerous infiltration. The sacrum is much softened throughout, and irregularly swollen by cancerous infiltration, besides presenting numerous distinct cancerous nodules; it makes a curve toward the left. Even where the bones of the pelvis retain their shape they are in great part softened and infiltrated with cancer, this is well seen on the back of the right ilium. The spines and transverse processes of the lower lumbar vertebræ are swollen into nodular masses by cancerous infiltration. The head of the right femur, though not changed in form or size, was so soft as to be easily cut with a knife, and on microscopical examination presented an infiltration of cancer cells into the enlarged lacunæ and Haversian canals.

From a woman, aged 60, who died in the Hospital 7th May, 1868. She had suffered eight and a half years from an ulcerated scirrhus of the breast, which had not been operated upon. During the last two years there were pains about the back, pelvis, and thighs. Once during this period a slough formed over the left metatarsus attended with general numbness of the foot. Later on there was hyperæsthesia of the same thigh, and for three months complete paraplegia. On post-mortem examination cancerous infiltration was found in the axillæ and both groins, but no deposits in the viscera.

Reported by Mr. Henry Arnott, in *Path. Soc. Trans.*, vol. xix, p. 356.

596.

SCIRRHOUS CANCERS.

597. A right Temporal Bone. Growing from its outer surface is a lobulated cancerous tumour the size of half a cricket ball. It sends a prolongation downwards beneath the zygoma, and forms a nodulated mass immediately in front of the articulation of the lower jaw. Rounded masses also project from the inner surface of the bone into the anterior and middle fossæ of the skull. These perforate the dura mater, and have produced extensive absorption of the brain.

From a woman, aged 64, who died in the Hospital October, 1868. She had suffered from cancer of the right breast for three years. The tumour in the temporal region had been noticed for six months. Cancerous tumours were also found in the lungs. There were no head symptoms except slight delirium.

Vide Series III, No. 59.

598. A fifth right Rib. Growing from its border and inner surface is a dense bony fusiform tumour, five inches in length and one and a half inches in thickness at its centre. It is composed of a fibrous and bony alveolar structure, the spaces being filled in with nucleated cells.

From a woman, aged 65, who died in December, 1869. The tumour was of nearly three years' growth. There was also a large cancerous tumour of the right great trochanter, which appeared two years later than the one on the rib. There was a growth also in the right crus cerebri.

Vide *Path. Soc. Trans.*, vol. xxi, p. 321.

Presented by Wilberforce Smith, Esq.

599. Sections of the heads of the Femora from the same case as No. 595. The right or upper one is infiltrated with cancer.

From a patient who suffered from a rare form of cancer of the pelvic bones concurring with scirrhus of the breast.

See *Path. Soc. Trans.*, vol. xix, p. 356.

Presented by Henry Arnott, Esq.

600. A portion of two Ribs, one of which a short distance from its angle is expanded into a soft cancerous tumour of circular flattened shape, measuring about four inches in diameter and two inches in thickness. It is invested by the periosteum.

From a woman, aged 54, who died in 1855 of cancer of the uterus. The uterus presented lobulated cancerous tumours. A smaller tumour was found on one of the ribs of the opposite side. The viscera were not affected.

P. M. Reg., vol. ii, No. 382; *Cancer Reg.*, 355.

601. 602.

603.

TUMOURS OF BONES OF UNCERTAIN NATURE.

604. A left Temporal Bone, with a somewhat lobulated tumour with smooth exterior the size of a hen's egg on the posterior surface of the petrous portion of the temporal bone, apparently projecting through from the internal ear.

605. A section of a portion of the vault of a Skull, showing a tumour situated partly within the cranial cavity, and partly external to the bone, which pulsated during life. On the outer surface of the bone the tumour spreads wider, is more prominent, and altogether larger than on the inner surface. At the centre the whole thickness of the bone has disappeared for a distance of an inch and a half. The tumour is compressed between the pericranium and the bone, but is only loosely connected with the latter. The inner table is destroyed to nearly double the extent of the outer, and the diploë is encroached upon to a greater extent than either. The bone is much increased in thickness, and is very hard

about the circumference of the aperture, the inner surface being more extensively affected. The section of the growth presents to the naked eye a very fine spongy appearance, traversed by a few fibrous bands, and in the intracranial portion several spiculæ of bone are seen.

The microscopical structure consists of a basis substance compound of a homogeneous material traversed by bands of fibrous tissue and vessels. Contained in the basis are numerous spaces of irregular shape, mostly distinct, filled with a homogeneous substance, and lined with a single layer of polygonal cells, each containing a single nucleus. The structure generally resembles that of certain enlargements and tumours of the thyroid gland, and may have been secondary to a primary affection of the thyroid gland, which in this case was much enlarged.

From a woman, aged 40, who in 1870 received a blow on the left side of her head, followed by the formation of a small blood tumour, which however disappeared on the following morning. One month afterwards a small hard but painless lump was detected on the parietal bone, a little to the left of the sagittal suture. This gradually increased up to the time of admission to the Hospital in August, 1874, when it measured thirteen inches in circumference, and nearly six inches in diameter.

Pulsating tumours subsequently appeared near the sternal end of the right clavicle, the right thigh, and the left hip.

Vide *Path. Soc. Trans.*, vol. xxxi, p. 259.

Presented by Henry Morris, Esq.

606. The upper part of a Sternum, showing a cyst the size of a small Tangerine orange with thick walls and uneven surface in the first piece of the bone. At the smaller posterior opening the section presents the appearance of medullary tissue.

607.

TUMOURS OF THE JAWS.

EPULIS.

608. The two halves of a section of part of the alveolar process of a lower Jaw. Growing from the alveolar edge of the bone, and from the adjacent anterior and posterior surfaces, is a dense white tumour of fibrous appearance, an epulis. It projects between and around the bicuspid teeth of the left side. It was removed by operation.

CYSTIC TUMOURS OF THE MAXILLÆ.

609.

CARTILAGINOUS AND OSSEOUS TUMOURS.

610. A portion of the left side of a lower Jaw, with a large enchondroma growing from its periosteum on its inner surface.

From a lady, aged 77, who had been operated on five times previously by Sir W. Fergusson, for a recurrence of the same growth. The tumour first appeared in 1865; this growth was removed by Mr. G. Lawson in 1878.

See *Lancet*, vol. i, 1878, p. 820.

Presented by George Lawson, Esq.

DENTIGEROUS CYSTS.

611.

FIBROUS TUMOURS.

612.

SARCOMATA.

613. A Sarcoma growing from the anterior surface of the horizontal ramus of a lower jaw.

Two years previously an Epithelioma had been removed from the lip.

Vide *Path. Soc. Trans.*, vol. xxii.

Presented by J. W. Hulke, Esq., F.R.S.

614. Part of the right Superior Maxilla, and two large tumours which occupied the cavity of the antrum (possibly sarcomata).

Removed from a boy, age 14, who made a good recovery.

Presented by A. Shaw, Esq., 1862.

MEDULLARY TUMOURS.

615. The left half of a lower Jaw, with the Tongue. Springing from the interior of the ascending ramus and angle of the bone is a large lobulated tumour or firm consistence, which projects both downwards and towards the mouth and nares. The oral surface of the growth is ulcerated.

616. The right half of a lower Jaw, with the Tongue and Larynx. The angle and a great part of the body have been completely destroyed by ulceration, and a firm malignant growth which originated in the substance of the bone projects downwards into the neck and also inwards towards the mouth. The growth is itself in great part destroyed by ulceration. The external carotid artery is completely enclosed within it.

HYDATIDS IN BONE.

617.

ANGIOMA INVOLVING BONE.

618.

BONES VARIOUSLY ALTERED BY THE GROWTH OF TUMOURS.

619. The base of a Skull, dried, showing complete destruction of the nasal bone and right superior maxilla by a tumour. The right malar bone is also partly destroyed, and the surface of the part remaining is roughened from ulceration; this change is also seen in the left nasal bone and adjacent part of the superior maxilla. The hard palate has almost disappeared.

620. A Skull, showing very extensive destruction of the bones of the face, the result of rodent ulcer. There has been ulceration of the frontal bone extending into the frontal sinuses and also into the cranial cavity through the ethmoid bone. A great part of the superior maxilla on the left side with both the nasal and lachrymal bones have disappeared.

621. A Skull, which has been the seat of a cancerous growth. The frontal bone is very extensively ulcerated, and is also perforated on the right side. It presents a coarse, spongy appearance, from the formation of a quantity of porous new bone. The parts involved are the right half of the frontal bone completely, and the anterior aspect of the left half of the lachrymal bones, the vomer and the nasal processes of the superior maxillæ. The upper and part of the inner wall of each orbit is seen to be also affected.

622. The roof of a Skull, from a case of cancer, showing a very deep and extensive ulcer of the frontal and parietal bones, which are perforated in several places. The margins of the ulcer are for the most part well defined, and in places formed by overhanging edges of bone. The base is very irregular and rough. Some portions of the original outer table still remaining show that bone has been formed for some distance around the ulcer, and to a greater extent still upon the corresponding part of the inner table.

623.

624. A Fibula, the upper part of which has been the seat of a tumour, probably a sarcoma, which has undergone ossification. The soft parts have been destroyed by maceration, and the bony framework alone remains. It is for the most part a hollow shell of bone, with here and there osseous septa stretching into its interior. The surface, broken in places, is irregular, and is marked by numerous channels for vessels. This is the "spina ventosa" of old writers.

625. A portion of a Parietal Bone, with a sebaceous tumour the size of a walnut pressing upon it, and producing a hollow, in the centre of which is a perforation concealed by a fibrous band which attaches it to the membranes of the brain. It produced no cerebral symptoms.

626. A portion of a Lower Jaw, from a man who died of extensive epithelioma of the lip. Part of the alveolar process has been destroyed, and the corresponding teeth have fallen out. There is a considerable loss of substance on the anterior aspect of the bone below the incisor teeth.

627. Part of the roof of a Skull, presenting large irregular erosions on the inner surface of the bone, in some places extending through its whole thickness. In the recent state these were occupied by masses of epithelial cancer springing from the dura mater; some of them are still seen filling up the cavities in the bone. A portion of the dura mater will be found at Series V, No. 20.

From a man, aged 45. The disease began in the antrum.

628. The roof a Skull, macerated and dried, exhibiting extensive ulceration and perforations of both tables, the cavities in the recent state being occupied by nodules of soft cancer. The surfaces of the bone unaffected by the growth show no signs of inflammation. The ulcers extend more deeply into the diplöe than in either table, thin plates and delicate fragments of the latter projecting from the edges of the perforations.

From a woman, aged 45, who died from cancer of the spine.
Vide Nos. 633, 783.

629. The other half of the Femur, No. 541. A crust of new bone has formed beneath the periosteum, and has spread out over the tumour on one side, and the layer of compact tissue of the femur is here much thinned and porous. On the other side a feather-like outgrowth of new bone has formed along the attachment of the tumour to the femur. The cancellous tissue is partly filled with earthy salts, and is hollowed out just above the epiphysial end, where it communicated with the growth through an opening in the compact tissue.

630. Part of a right Tibia and Fibula, macerated and dried. The tibia is expanded and hollowed out by a large central cavity, communicating with the surface by an oval aperture two inches in long diameter. In the recent state this cavity was filled by a fibro-nucleated tumour. Osseous bands pass between the tibia and fibula.

From a Greenwich Pensioner, who died aged 81, in 1861. For ten years he had been under treatment for an ulcer in the front of the leg originating in the cicatrix of a wound received at Trafalgar in 1801. During the last four years the ulcer became irritable, and gradually assumed malignant characters, throwing up cauliflower-like excrescences. The osseous bands of union between the bones are doubtless the result of the original wound.

Described by Dr. Davis, with a report by Mr. Nunn and Mr. Hulke, in *Path. Soc. Trans.*, vol. xii, p. 220.

631. A portion of the shaft of a Fibula, macerated and dried. It is covered with fungous masses composed of extremely delicate, spongy, and reticulated bone, forming the framework of a cancerous tumour.

Presented by R. Cartwright, Esq.

632. Part of a Rib, macerated and dried. The inner half of the shaft is covered with outgrowths of delicate spongy bone, and its interior is in part absorbed. These delicate spiculæ formed the framework of a cancerous growth.

633. The upper two-thirds of a Femur, macerated and dried, showing large cavities traversed by delicate bony spiculæ and processes, round which the cells of the cancellous tissue are seen to be much enlarged. A little below the trochanter nearly the whole thickness of the bone has been absorbed for a space of two and a half inches. In the recent state the bone was infiltrated with medullary cancer. From the same case as Nos. 628 and 783.

634. The upper part of a left Tibia and Fibula, macerated and dried. The tibia is much expanded and hollowed into large cavities, the walls of which are composed of reticulated spongy bone, and its surface, where not destroyed by ulceration, is covered with outgrowths of similar bone. In the recent state these structures formed the framework of a large soft cancerous mass, consisting almost entirely of large nucleated cells.

From a man, aged 20, whose thigh was amputated by Mr. Shaw, 22nd May, 1861. The disease had been noticed five months. The patient made a good recovery.
Surg. Reg., vol. viii, No. 205.

635. The outer half of the Tibia of No. 593, macerated and dried; showing the implication of the superficial part of the bone.

636. A Skull, exhibiting great destruction of the bones of the right side of the face, primarily from the growth of a tumour, with secondary atrophy from pressure of a mask worn to conceal the deformity. The orbital ridge, the nasal bone, and the greater part of the superior maxilla are gone, and the orbital plate of the frontal bone perforated over an area the size of a shilling. The right orbital cavity has been much diminished in size by an expansion of the bony structure of the inferior and inner walls, and its edges bevelled off by the pressure of the mask. There is also a perforation of the skull at the anterior end of the temporal ridge on the right side. The mask is attached to the skull.

SERIES VI.

DISEASES OF JOINTS.

INFLAMMATION AND ITS RESULTS.

DISEASE PROBABLY BEGINNING IN THE SYNOVIAL MEMBRANE.

637. A Kuee Joint, injected and laid opeu. The synovial membrane is much thickened. The articular cartilages are in great part destroyed, exposing the cancellous tissue; the ligaments also are nearly gone. The articular surface of the patella is ulcerated, and the exposed part is covered with lymph.

638. A Knee Joint, exhibiting the effects of chronic inflammation. The articular cartilages of the femur, tibia, and patella are in part destroyed, and the underlying boue is ulcerated. The synovial membrane is thickened, and the ligaments and semilunar cartilages almost destroyed by ulceration.

639. A left Kuee Joint. The anterior surface of the condyles is extensively denuded of cartilage, the margin is irregular and ragged. Four smaller patches of ulceration exposing the bone are seen on the under surface of the inner condyle. The semilunar cartilages are also ulcerated.

PULPY DEGENERATION OF THE SYNOVIAL MEMBRANE.

640. The articular ends of a Humerus, Ulna, and Radius, removed by excision. The bones are almost denuded of cartilage. The synovial cartilage shows an extreme degree of thickening, the result of pulpy degeneration.

DISEASE PROBABLY BEGINNING IN THE ARTICULAR ENDS OF BONES.

641. The head and great trochanter of a Femur, removed by excision. The cartilages are ulcerated, and the head of the bone carious.

From a girl, aged 9, who had suffered from disease of the hip joint for four years. She survived the operation, and died of phthisis. The case was under the care of Mr. Hulke.

642. The head, neck, and great trochanter of a Femur, forming three irregularly shaped masses of bone, which are carious and encrusted with osseous outgrowths.

From a man, aged 22, who had suffered from disease of the hip joint for four years. The bones were removed in the operation of excision of the joint by Mr. Hulke. The patient recovered.

See *Surg. Reg.*, 1870, No. 431.

643.

SPECIMENS ILLUSTRATING THE CHANGES IN THE STRUCTURES OF JOINTS, OR IN THE ARTICULAR ENDS OF BONES, THE EFFECTS OR CAUSE OF JOINT DISEASE.

DESTRUCTION OF THE LIGAMENTS.

644.

Vide Nos. 637, 638.

SEPARATION AND LOOSENING OF THE ARTICULAR CARTILAGE FROM THE BONE.

645. The head of a Femur, which is carious, and in great part denuded of cartilage. The cartilage is seen in places to be separated from the bone beneath.

From a boy, aged 6, whose hip joint was excised by Mr. Hulke. The operation was followed by recovery.
Surg. Reg., 1870, No. 81.

646.

ULCERATION OF ARTICULAR CARTILAGE.

647. The upper end of a right Femur. The cartilage is in great part destroyed by ulceration, and the head of the bone is carious. The capsular ligament, part of which remains attached to the neck, is much thickened.

648.

ULCERATION OF THE ARTICULAR SURFACES OF BONES.

649. The bones of right Knee Joint, macerated and dried. The articular surfaces are denuded of cartilage, and carious. In the head of the tibia is the cavity of an abscess.

650. The bones of a right Elbow Joint, macerated and dried. The articular ends are porous, denuded, and encrusted with new bone. The disease extends two inches beyond the articular surfaces.

651. The bones of a left Elbow Joint, injected, macerated, and dried. The articular surfaces are denuded, ulcerated, and carious, and the outer part of the trochlea necrosed but not separated. The ulceration extends for some distance down the outer surface of the ulna from the radio-ulnar articulation. New bone is deposited round the articular surface.

652. The bones of a right Elbow Joint, macerated and dried. The articular ends of the bone are extensively destroyed by caries, and encrusted by outgrowths of new bone. The end of the radius is especially distorted. The disease extends for some distance along the shafts of the bones.

653. The lower end of a Humerus, injected. The articular surface is denuded and ulcerated, and the ends of the bone highly vascular. At the cut end it can be seen that the humerus is encrusted with new bone, and contains a partly detached sequestrum in its interior.

654. A right Iliac Bone and the upper part of the Femur, macerated and dried. The acetabulum is enlarged, its articular surface destroyed, its walls porous from caries. The head of the femur is diminished in size, denuded of cartilage, and the neck is rough and porous.

655. Part of a right Os Innominatum, with the upper part of the Femur, macerated and dried. For a considerable distance round the acetabulum the surface of the bone is porous, and covered with stalactitic processes and crusts of new bone. The acetabulum is much enlarged, and altered in shape and very shallow;

immediately above is a newly-formed hollow, in which the head of the femur rested. (It is now artificially attached to it.) The head and neck of the femur are porous and carious, and the part of the head which was in contact with the new socket is encrusted with new bone.

656. The bones of a right Hip Joint, macerated and dried. The acetabulum is much enlarged, and with all the surrounding part of the os innominatum is porous and rough from caries. Its margins present outgrowths of new bone. The fundus of the acetabulum has ulcerated away, leaving a large hole through which the denuded head of the femur projects somewhat into the pelvis. The head, neck, and trochanter major are carious.

657. The bones of a left Hip Joint, macerated and dried. The acetabulum and surrounding bone is carious, and presents outgrowths of new bone. At the bottom of the acetabulum is a large perforation, through which the head of the femur, which is carious, denuded of cartilage, and much diminished in size, projects somewhat into the pelvic cavity.

658.

659. The bones of a Hip Joint. The cartilages and superficial parts of the bone have been removed from the articulating surfaces of the joint. The head of the femur is diminished in size, the cavity of the acetabulum is enlarged and all trace of the natural arrangement of its surface and of the attachment of the ligamentum teres is lost. New bone has been deposited around. The bones, though of an adult, are light and cancellous throughout.

660. The bones of a right Hip Joint, showing changes the result of chronic inflammation. The articular surfaces are destroyed; the head of the femur is diminished in size and carious. The acetabulum is enlarged, and much new bone has been formed about its edges, and also on the surface of the femur and iliac bone.

661. The bones of a right Hip Joint, showing the effects of long continued inflammation. The acetabulum is large and shallow, its base is ulcerated, irregular, and perforated in two places, and the edges are worn down. The head of the femur has been absorbed, and the stump of the neck is articulating with the acetabulum. The leg is flexed to such an extent that the axis of the thigh is directed almost vertically upwards ; it is also adducted. Bridges of new bone have been formed along the linea aspera just below the trochanters.

662. The bones from a case of chronic inflammation of the Knee Joint. All the articular surfaces are extensively ulcerated. The anterior part of the head of the tibia and posterior surface of the condyles are worn away so as to fit each other. The knee was probably flexed at a right angle.

663. The bones of a Knee Joint, exhibiting ulceration of the articular surfaces, and a formation of bone on the lower end of the shaft of the femur, which is considerably thickened. On the front of the bone there is a node, possibly of syphilitic origin.

664. The bones of the Ankle Joint, with the tarsus and metatarsus, from a case of chronic inflammation. The lower ends of the tibia and fibula are widely expanded, and rough from a deposit of new bone. The astragalus has been partly absorbed, and posteriorly is anchylosed with the os calcis. The scaphoid is flat from absorption, is displaced upwards, and is articulating by a newly formed facet with the tibia. The upper surface of the other tarsal bones is also ulcerated.

665. The bones of an Ankle Joint, with the Os Calcis. The articular surfaces are perforated by numerous apertures, and the intervening parts are eburnated. New osseous tissue has been formed upon the surface of all the bones, extending on the fibula for some distance above the ankle joint.

666. The bones of an Ankle Joint. There is slight ulceration of the upper articular surface of the astragalus, and extensive destruction of the os calcis on the inner side, and at the point of attachment of the tendo-achillis. The tibia and fibula are flattened, approximated, and curved, probably secondarily to the disease of the joint.

667. The bones of an Ankle Joint. The ends of the tibia and fibula are expanded from a growth of new bone, and their articular surfaces are ulcerated, The corresponding surface of the astragalus is unaffected, but the under surface is deeply ulcerated. The os calcis is wanting.

668. Some of the bones of the right Tarsus, Metatarsus, and Phalanges, macerated and dried, showing the effects of inflammation and ulceration. The bones are dry, light, and brittle from rarefaction. The bases of the metatarsal bones are anchylosed together and united to the tarsal bones, and all exhibit carious ulceration of the surface, whilst in some there are cavities. Very little new bone has been formed.

669. The Os Calcis, Cuboid, Scaphoid, and two Cuneiform Bones; also a fragment of the alveolar border of the Lower Jaw, containing two molar teeth. The bones are all more or less rarefied and carious, and their articular surfaces in part ulcerated. The os calcis presents a large cavity, and is partly encrusted by new bone.

670.

671. The lower part of a Humerus, with the Radius and Ulna, from a case of chronic inflammation of the elbow joint. The articular surfaces are ulcerated, and much new bone has formed around them. The end of the humerus is enlarged, and its substance rarefied. A section has been made through it. There is a small supra-condyloid process on the humerus.

672. A left Carpus and Metacarpus. All the bones of the carpus, except the trapezium, trapezoid, and pisiform, show extensive carious ulceration. The proximal ends of the metacarpal bones and trapezium are rough from a deposit of new bone on the surface.

673. The bones of a left Wrist and Hand, exhibiting changes due to chronic inflammation. New bone has been formed upon the lower end of the radius and ulna, and on both palmar and dorsal surfaces of most of the carpal and metacarpal bones. The thumb is not affected. The articular surfaces are scarcely at all involved.

674. The bones of a left Hand, showing slight ulcerious cration of the carpus and proximal ends of the metacarpal bones. Some new bone has been formed upon the surface of the latter. The bones of the thumb are not involved.

675. The bones of a right Hand, exhibiting almost complete destruction of the carpus and proximal ends of the metacarpal bones, with ulceration of the articular ends of the radius and ulna, and enlargement of the former from a formation of new bone upon its surface.

SYNCHONDROSES.

676. The bones forming a left Sacro-iliac Synchondrosis, showing changes following on necrosis of the sacrum. A sequestrum, fallen out of a small hollow in the lateral surface of the sacrum, lies in the bottom of the jar. The synchondrosial tissues were destroyed by long continued suppuration.

From a boy, who died of tubercular peritonitis.

Presented by C. Moore, Esq.

SEPARATION OF EPIPHYSES.

677. The right Os Innominatum and Femur of a child, macerated and dried. The acetabulum is extensively destroyed by carics. There is also considerable loss of substance on the dorsum ilii, with some outgrowths of new bone; and the whole innominate bone is unusually spongy and porous. The epiphyses and the segments of the acetabulum are still ununited. The head and neck of the femur are carious; the epiphyses have separated.

DISPLACEMENT AND DISLOCATION OF THE BONES FROM DISEASE OF JOINTS.

678. A right Innominate Bone, exhibiting changes due to inflammation of the hip joint. The acetabulum, deepened by absorption of its base, is in part filled up by an irregular growth of new bone at the posterior edge, and is also encroached upon by a ring of bone which surrounds a cup-shaped cavity situated over the obturator foramen. The base of this cavity, which projects into the pelvis, is incomplete, and is formed by bone possibly developed in the thyroid membrane. An irregular mass of bone overhangs it and helped to retain within it the dislocated head of the femur.

679. A portion of a right Innominate Bone, showing an enormous saucer-like cavity replacing the normal acetabulum. The edges, except in front, are formed by walls of irregularly deposited new bone, worn internally by the movements of the head of the bone, which were probably very free. New bone has also been deposited on the pelvic aspect of the bone.

680. The bones of a Knee Joint, showing changes the result of chronic inflammation. The cartilages and portions of the articular surfaces have been destroyed, and new bone has been formed along the articular edges. The posterior surface of the head of the tibia is hollowed out into a deep cavity, the edges of which are formed partly by new bone. In this cavity the internal condyle of the femur has rested.

Vide Nos. 702, 703, 704.

REPAIR AFTER CARIES OF THE ARTICULAR ENDS OF BONES.

681. A Humerus and Ulna. The humerus is short, heavy, much thickened, and presents an irregular surface from the growth of new, finely-porous, bone. The head of the bone has been destroyed by ulceration; the neck and upper part of the shaft are excavated, and a new articulating surface has been partly formed. The humerus and ulna are completely united; a cavity below the external condyle has been occupied by the head of the radius.

ANCHYLOSIS.

FIBROUS.

682. The Bones of a left Elbow Joint, from a case of fibrous anchylosis, macerated and dried. The external condyle of the humerus is enlarged in a

direction downwards and outwards, the result being that the capitellum is on a lower level than the trochlear surface. A small amount of new bone has formed at the edges of the articular surfaces and upon the ridge leading to the external condyle. During life the joint was fixed in a position of semiflexion, and it is possible that the enlargement of the external condyle may be due to the diminished pressure exerted in that position by the head of the radius on the capitellum.

From the left arm of Dr. A. P. Stewart, late Physician to the Hospital, at whose express request these bones were removed, and are placed in the Museum. The anchylosis had existed for many years, but at the autopsy it proved to be of so slight a nature that it gave way whilst the forearm was being held for the humerus to be sawn through, when free movement was at once restored.

OSSEOUS.

683. Sections of the bones of a Hip Joint, exhibiting complete osseous anchylosis after fracture of the neck of the femur, and displacement upward of the lower fragment. The head of the bone is firmly anchylosed in the acetabulum, whilst the trochanters are raised above the level of the ilio-pectineal line. The portion of the shaft in contact with the head is firmly united to it, and the point of union is surrounded by masses of new bone with a smooth exterior.

684. Complete and smooth osseous anchylosis of a right Hip Joint. The femur is directed upwards across the front of the body.

685. The bones of a Hip Joint, exhibiting a complete smooth osseous anchylosis. The axis of the shaft of the femur is directed forwards and inwards.

686. A section through the bones of a Hip Joint, showing osseous anchylosis between the anterior surface of the head of the femur and the adjacent part of the acetabulum. The union is formed by a bridge of dense new bone.

From Mr. Shaw's Collection.

687. The bones of a left Hip Joint, showing a complete and smooth osseous anchylosis, in such a position that the axis of the thigh must have been directed across the body to the right side.

688. Section through the bones of a Hip Joint, exhibiting osseous anchylosis of their articular surfaces. The head of the femur has been entirely absorbed; the section of shaft shows it to be of almost ivory density.

689. The bones of a Knee Joint, exhibiting a complete osseous anchylosis of their articular surfaces nearly at a right angle. The ends of the bones are expanded and carious. The patella is anchylosed to the femur.

690. The bones of a Knee Joint, firmly anchylosed in a position of semi-flexion by bridges of dense new bone. All the bones are enlarged, very heavy, and covered with masses of newly formed bone. The patella is firmly attached to the outer condyle of the femur, and growing from its lower edge is a stalactitic bony process. The head of the fibula is enlarged and firmly united to the tibia.

691. The bones of a Knee Joint. The articular surfaces are deeply ulcerated, and new bone has been formed at their edges and upon the internal condyle of the femur. The patella is firmly anchylosed to the external condyle.

692. The bones of a Foot, minus the phalanges, completely anchylosed at every joint.

693. A Scapula and Humerus united by bone. The head of the humerus has disappeared, and the upper part of the shaft is fixed to the remains of the glenoid cavity. The humerus is very heavy, and the sections show only traces of the medullary cavity, which is filled with osseous tissue. Its surface is formed by an irregular growth of new bone.

694. Bones of an Elbow Joint, firmly anchylosed at right angles with each other. The radius is fixed immediately above the ulna, and the bones are small and flattened from side to side. The condyles of the humerus are shrunken, and the joint diminished in breadth. The rough lines leading upwards from each condyle on the humerus, the tubercle for the tendon of the biceps, the mark of insertion for the brachialis anticus, anconeus, &c., are all smoothed out, while the shafts of the radius and ulna are marked as usual for the attachment of the muscles which move the fingers. The disease probably originated in strumous affection of the bones of the joint, as a part of the olecranon appears to have been removed by ulceration.

695. The bones of an Elbow Joint, exhibiting a clean and smooth osseous anchylosis of their articular surfaces. The prominent bony points are rounded off.

696. Bony anchylosis of the Humerus and Ulna in a position of slight flexion. The surfaces at the point of union are becoming smooth. The radius is not present.

CHANGES DUE TO RHEUMATOID ARTHRITIS

697. The bones of a Hip Joint, showing changes due to rheumatoid arthritis. The depth of the acetabulum is increased by the absorption of its base, and by the calcification of the cotyloid ligaments and formation of new bone at the edges. The articular surface of the femur is almost entirely removed by absorption, and there is a rough nodulated formation of new bone around the margin of the head, and at one spot on the neck also, of the femur. The bones are yellow and greasy.

698. Several joints from the same subject, showing chronic rheumatoid or osteo-arthritis.

(1.) *The Right Elbow Joint.*

The lower end of the humerus is much altered in shape, nodulated, and anchylosed to the detached coronoid process of the ulna. The end of the radius is distorted, and denuded of cartilage, and the orbicular ligament has been almost completely destroyed. The olecranon is enlarged and nodulated. Hanging by pedicles and fringes of the thickened synovial membrane are numerous cartilaginous nodules, several of which were found lying loose in the enlarged articular cavity. The synovial membrane was greatly thickened, and presented calcareous and cartilaginous plates.

(2.) *The Left Hip Joint.*

The great trochanter is much enlarged, and rested during life against the outer surface of the ilium, where a kind of facet is visible. The head of the femur, nodulated and altered in shape, is detached from the shaft, to which in the recent state it was found to be united by a fibrous band containing cartilaginous nodules representing the neck; it is retained in the acetabulum by the ligamentum teres. The synovial cavity is enormously enlarged, extending down the shaft of the femur for a distance of five inches. The capsular ligament along its attachment to the femur is converted into a hollow plate of bone. In the position of the ilio-femoral ligament is a thick curved process of

bone nearly four inches in length; its base is fused with the lesser trochanter, and it ends above in a sharp point.

(3.) *The Left Knee Joint.*

In the knee joint the articular ends of the bone are also nodulated and enlarged, and hanging by fringes of the synovial membrane are numerous ossific and cartilaginous nodules.

From a man, aged 66, who died in the Hospital July, 1866. Sixteen years before he had been under treatment for disease of the left knee. He was discharged with the joint much enlarged and partially anchylosed, but he was able to walk well upon it. About twelve years afterwards he fell and fractured the neck of his left femur; he recovered with a strong serviceable leg, but great swelling remained about the hip. Eighteen months afterwards the right elbow joint became affected; he gradually lost strength, and died ultimately from cancer of the pylorus. His kidneys were granular and cystic.

Recorded in *Path. Soc. Trans.*, vol. xix, p. 319.

Presented by Campbell De Morgan, Esq.

699. A left Knee Joint from the same case as No. 709, macerated and dried; the articular cartilages are ossified, much thickened, and nodulated. The upper end of the tibia presents a perfectly flat articular surface. The edges of the patella are encrusted with new bone. The crucial ligaments have been completely destroyed. There was a bursa the size of a hen's egg in the popliteal space, unconnected with the joint. No other joints were affected.

From a woman, aged 78, who died of cancer of the peritoneum, 10th October, 1860. The disease of the joints had been noticed during life.

Post Mortem Reg., vol. iv, No. 140.

700. The bones of a Knee Joint, exhibiting changes due to chronic rheumatoid arthritis. New bone has been formed around the articular surfaces. Ridges of bone between the condyles of the femur mark the point where the patella has probably been adherent. The articular surfaces have been destroyed by ulceration.

701. The bones of a Knee Joint, exhibiting changes due to chronic inflammation and rheumatoid arthritis. The internal condyle of the femur is enlarged by the formation of new bone on its surface; the external is smaller, and its articular surface is in great part destroyed and the cancellous tissue ulcerated. There is a deep hollow in the corresponding surface of the tibia. The internal articular surface is similarly affected, but not to the same extent. New bone has been formed upon the head of the tibia. The bones are yellow and greasy.

702. A Scapula and part of a Humerus and Clavicle, from a case of chronic rheumatoid arthritis, showing a dislocation of the shoulder joint from disease. The head of the humerus has been dislocated forwards beneath the coracoid process; it is deeply notched, and fits closely to the anterior margin of the glenoid cavity, which is partially absorbed. A small deposit of new bone has taken place on the venter of the scapula. The articulating surfaces are partly cartilaginous, partly eburnated. The head of the humerus lay upon the second rib, which was much indented. The clavicle has been fractured near its acromial end, and has united by ligament only.

From an emaciated woman, aged 64, a dissecting-room subject. No history.

Vide *Path. Soc. Trans.*, vol. i, p. 316.

Presented by C. Moore, Esq.

703. A Clavicle, Scapula, and Humerus, showing a dislocation of the shoulder joint, the result of chronic rheumatoid arthritis. The head of the humerus has been thrown forwards beneath the coracoid process in front of the anterior margin of the glenoid cavity. The opposed surfaces of the two bones are partially absorbed, that of the humerus being only slightly convex, that of the

scapula slightly concave. A considerable quantity of new bone has been deposited all round the surfaces in contact, forming a shallow ball and socket articulation, deepened and strengthened by large pieces of bone developed in the capsule. The articular surfaces and the under part of the coracoid process, with which the enlarged head also articulates, are hard, and have an ivory-like polish.

Vide *Path. Soc. Trans.*, vol. i, p. 315.

Presented by C. Moore, Esq.

704. A Scapula, with part of the Clavicle and Humerus, from a case of chronic rheumatoid arthritis. The head, which has been dislocated forwards beneath the coracoid process, is hollowed out by attrition against the edge of the glenoid cavity, and considerably enlarged by a deposit of new bone all around it. A very broad joint has been formed on the venter of the scapula, and some new bone deposited in the capsule. A dense fibrous substance, having a thin free edge toward the joint and a thick blunt margin outwards, is attached all round the border of the socket. Considerable bosses of new bone are developed in it, the inner surfaces of which form part of the joint.

From a subject in the dissecting-room, a stout muscular man of 60. No history.
Vide *Path. Soc. Trans.*, vol. i, p. 316.

Presented by C. Moore, Esq.

705. A Radius and Ulna, exhibiting enlargement and eburnation of the upper articular surfaces, the result of chronic rheumatoid arthritis. The head of the radius is surrounded by a ring of new bone. The articular surfaces of the ulna are deepened by a growth of new bone at their edges and by destruction of the cartilages and subjacent bone.

CHANGES ASSOCIATED WITH LESIONS OF THE NERVOUS SYSTEM.

706.

CHANGES IN JOINTS DUE TO GOUT.

707. The bones of a Great Toe. There is an extensive deposit of urate of soda in the articular cartilages. Similar deposits existed in the toe of the opposite side and in the knee joints. Two sesamoid bones are seen on the posterior surface of the metacarpal bone.

From a dissecting-room subject.

708.

LOOSE BODIES IN JOINTS.

709. A right Knee Joint. The whole of the synovial membrane is covered with long villous processes, and below the patella are pedunculated cartilaginous nodules. The ends of the bone are enlarged; the articular surface of the tibia is in great part denuded of cartilage, and the semilunar cartilages have almost entirely disappeared. The crucial ligaments are softened and shreddy, and the articular surface of the femur is nodulated. A small bursa was found in the popliteal space.

710. A Knee Joint, showing a pendulous fibroid growth. A firm, fibrous, pointed growth one and a half inches in length hangs by a narrow neck from the posterior attachment of the internal semilunar fibro-cartilage to the head of the tibia and lies upon the articular cartilage.

EXCISION OF JOINTS.

711. The inner half of a section through a left Knee Joint, from a leg amputated after excision of the joint. Firm bony union has occurred, and the parts are in an excellent position. On the inner aspect of the tibia, a little below the head, the openings of two sinuses are seen; these lead into an abscess cavity in the head of the tibia, seen in the following specimen. Another sinus is seen to open over the internal condyle of the femur at the extremity of the scar which marks the site of the excision wound. The patella has been removed.

711a. The corresponding half of the same section with the softs parts removed. An abscess cavity, the size of a hazel nut, is seen in the head of the tibia: its contents are soft and discoloured.

From a young man, whose knee was excised twelve months previously. Amputation was performed at the urgent request of the patient. There was much thickening about the joint and discharge from the sinus.

Presented by J. W. Hulke, Esq., F.R.S.

712. A vertical section through a Knee Joint, from a leg amputated six months after excision of the joint. The surfaces are in accurate contact, but bony union has not occurred. At the operation a wire suture was passed through the sawn ends of the femur and tibia: it is now seen *in situ*.

From a man, aged 42. Excision in preference to amputation was performed at the request of the patient.

Presented by Henry Morris, Esq.

713. A vertical section through a Knee Joint. The leg was amputated four months after excision of the joint. The femur is overriding the tibia to a considerable extent. Bony union has not occurred, but there is a quantity of soft uniting medium between the bones.

From a child, aged 10 years, affected with strumous disease of the knee joint.

Presented by Andrew Clark, Esq.

714. The head and neck of a left Femur, macerated and dried, removed in excision of the hip joint. The head is carious, partly encrusted with new bone, and contains a large cavity. The fragment has been removed by an angular cut, which runs vertically through the neck and horizontally across the lower part of the great trochanter.

Presented by A. Shaw, Esq.

715. The head of a left Femur, macerated and dried, removed in excision of the hip joint. The head is much diminished in size, and porous from caries. It has been removed by a cut passing obliquely through the neck.

Presented by A. Shaw, Esq.

716. The head of a Femur, affected with caries, removed by excision.

Presented by Campbell De Morgan, Esq.

717. A similar specimen.

718. The bones and soft parts after recent excision of the Knee Joint. The articular ends have been sawn off, and the cut surfaces are in contact, but no union has taken place between them. The interstices of the cancellous tissue of both bones are filled with inflammatory products, giving the sections a smooth osseous appearance. The periosteum is detached from a portion of the femur.

719. A Knee Joint. The articular ends of the femur and the tibia have been removed by the operation of resection. The patella which was left has intruded itself in a horizontal position between the ends of the femur and tibia. No union has taken place. The cancellous tissue of the end of the femur is rarefied, and its interstices are filled in places with inflammatory products.

720. The articular ends of the Femur and Tibia, the latter in two slices, with the patella, removed in resection of the knee joint. The bones are denuded of cartilage and extensively ulcerated, especially the inner condyle of the femur and corresponding surfaces of the tibia. Rough deposits of new bone are seen upon the surface and edges of the femur and patella.

721. The articular extremities of a Humerus, Ulna, and Radius, removed by excision. The ulna is partly denuded of cartilage; the rest of the cartilages are but little affected. There was pulpy degeneration of the synovial membrane.

From a boy, aged 4 years, who had suffered from disease of the elbow joint for eight months. The patient recovered.

Presented by J. W. Hulke, Esq., F.R.S.

722. The articular ends of a left Radius, Ulna, and the lower end of the Humerus, macerated and dried, removed in excision of the joint. The bones are carious, and the humerus is partly necrosed. The operation was followed by exfoliation of an inch of the stump of the humerus, which is seen fastened to the excised portion.

From a man, aged 33, who injured his arm by falling down stairs. Suppurative inflammation of the elbow joint followed. Notwithstanding an attack of erysipelas, he made a good recovery.

Male Surg. Reg., 1857, vol. iv, No. 270.

FOREIGN BODIES IN JOINTS.

723.

SERIES VII.

INJURIES, DISEASES, AND DEFORMITIES OF THE SPINE.

ABNORMALITIES OF THE SPINE.

ABSENCE OF HALF A VERTEBRA.

724. The Skeleton of an adult female. The spine exhibits three lateral curves, one with the convexity to the right, greatest opposite the third dorsal vertebra; a second with the convexity to the left, in the lower dorsal region; and the third in the lumbar region with the convexity to the right. The second and third dorsal vertebræ are partly united by a bridge of new bone, situated on the (right) convex side of the curve which exists at that level. The left half of the third dorsal vertebra is absent, the laminæ of the fifth and sixth cervical have not united, the spinous processes being bifid. There are only eleven ribs on the left side, whilst on the right side the number is normal. The sternum projects forwards, and the ensiform cartilage is twisted to the left. There is the usual rotation of the bodies of the vertebræ found in cases of curvature. The left shoulder is raised, and the pelvis is slightly oblique, the left side being the higher. The left arm presents some peculiarities. The radius is wanting, the ulna is shortened and curved, with the concavity looking upwards; the elbow joint cannot be extended beyond a right angle. The lower end of the ulna articulates with the largest of the three bones which alone form the carpus. The thumb is absent. The bones of the right thumb also are small.

SPINA BIFIDA.

725. The last Lumbar Vertebra and Pelvis of a male infant, with the integuments of the back. The posterior wall of the sacral canal is deficient, but the remains of the sac of membrane which appears once to have covered it in are visible.

726. The Lumbar Vertebra and Pelvis, with part of the iliac bone of the left side removed so as to show the sacral plexus. The sac of a spina bifida is seen over the upper part of the sacrum.

727. The lower Lumbar Vertebræ and the Sacrum. The posterior wall of the sacral canal is deficient, and the spinal membranes have bulged through, forming a large sac, which has been laid open by removal of part of the integument. The sacral nerves are seen crossing it on its anterior wall. Part of the lumbar region of the spinal cord has also been exposed by the removal of the bodies of the vertebræ on one side.

728. The Sacrum and Laminæ of the lumbar vertebræ of a fœtus, with the soft parts removed. The posterior wall of the spinal canal of the sacrum and last lumbar vertebra is deficient.

INJURIES OF THE SPINE.

FRACTURE.

729. The first two Cervical Vertebræ. The posterior arch of the atlas is wanting. The anterior arch with the articulating and transverse processes is displaced forward so as to lie in front of the body of the axis, to which it is united by firm bony anchylosis, so that the neural canal is here represented by two rings, one immediately in front of the other and separated by the body of the axis. The posterior arch of the atlas must have remained *in situ*, the fracture having taken place immediately behind the articulating processes. The odontoid process of the axis has been broken off at its base, remaining attached above to the occipital bone. In consequence of this dislocation forwards of the atlas, the condyles of the occipital bone come to rest on the superior articulating processes of the axis.

The patient fell head foremost from a hay-rick; he was stunned, but shortly recovered and walked for medical aid. In two days he was able to resume his occupation. His neck was stiff, and he could not rotate his head, and there was some difficulty of deglutition from the pressure of the displaced atlas against the œsophagus. He died one year afterwards of dropsy, unconnected with the injury. There was never any paralysis.

Related by Mr. A. Shaw, in *Holmes's System of Surgery*, vol. i, and in *Med. and Chir. Trans.*, vol. xx, p. 78, by Mr. B. Phillips.

730. The dorsal portion of a Vertebral Column. The appearances of an old united fracture are visible in the fifth dorsal vertebra. The fracture appears to have extended through the body of the superior articular processes and arch. As a result of the fracture a moderate degree of lateral curvature has been produced, convex towards the left side. The fractured surfaces are completely united, and the fourth vertebra is joined to the fifth by dense bone, the intervertebral substance having disappeared. Outgrowths of bone have taken place from the adjacent edges of the bodies of the fifth and sixth vertebræ, though they are not anchylosed. Portions of two ribs on the right side are anchylosed at the seat of injury. The vertebral canal presents a slight angular curvature, but its capacity does not appear to be diminished.

Described by Mr. A. Shaw, in *Holmes's System of Surgery:* Article, Injuries of Back, vol. ii, p. 230, 1st Ed.

731. A portion of a Spinal Column, consisting of seven dorsal vertebræ, extensively fractured. On the right side the necks of two ribs and three transverse processes are broken. On the left side the necks of three ribs and two transverse processes. Three spinous processes are broken off, and the laminæ of two vertebræ comminuted. One vertebra is almost completely severed from the one below by a fracture extending partly through its body and partly through its intervertebral substance.

The patient died paraplegic forty-eight hours after the injury. From Mr. Langstaff's Museum.

Presented by Mitchell Henry, Esq.

732. A longitudinal section of a portion of a Spinal Column from the lower dorsal region. An oblique fracture extends across the body of one of the lower dorsal vertebræ and the intervertebral substances above and below it. The upper fragment is displaced forward to such an extent that the spinal canal is obliterated and the cord completely severed.

733. Longitudinal section of a portion of a Spine, fractured in the lower third of the dorsal region. The vertebra next above the fractured one has been displaced forward to such a degree that the portion of the spinal canal opposite to it is much narrowed, and is greatly in advance of the line of the canal below. There is partial bony union between the posterior third of the upper and the anterior third of the lower vertebral bodies.

The patient had paraplegia, with incontinence of urine, but survived the accident eight months. On post-mortem examination, numerous phosphatic calculi were found in the bladder and both kidneys.

For the Spinal Cord, see Series IX, No. 870.

Presented by A. Shaw, Esq.

Engraved in *Holmes's System of Surgery*: Article, Injuries of Spine.

CARIES (Ulceration) OF THE VERTEBRÆ.

734. The Lumbar Vertebræ, bisected through their bodies, with the cord *in situ*. The bodies of the fourth and fifth vertebræ are hollowed out by an irregular cavity, which also involves the intervertebral substance. This cavity communicates with an abscess on the anterior surface of the spine, which extends upwards on the right side as high as the last dorsal vertebra.

From a man, aged 30, who died suddenly, 7th November, 1862, from thrombosis of the pulmonary artery. The spinal caries followed a sprain, incurred twelve months previously. The supra-renal capsules, which are preserved in the Museum, were in an advanced stage of Addison's disease.

Post Mortem Reg., vol. v, No. 1513.

735. Section of four upper Dorsal Vertebræ, with the cord *in situ*, and the ends of the ribs on the left side. The cavity of an abscess is seen between the ends of the ribs and the transverse processes, one of which is broken off. This abscess communicates with the spinal canal by a narrow channel, through which a glass rod is passed. The surface of the dura mater is coated on this side by a thick mass of lymph.

736. The right half of a vertical section through the bodies of the five Lower Dorsal and two upper Lumbar Vertebræ, with portions of two others. The bodies of six of the vertebræ are extensively destroyed by carious ulceration, which has also involved some of the laminæ on both surfaces. There is no displacement, and the spinal canal is not encroached upon. New bone has been formed around some of the articular surfaces, but they have not become anchylosed.

737. The last Dorsal and the Lumbar Vertebræ, with the pelvis and the sac of a right psoas abscess, dried and varnished. There has been carious disease of the bodies of the second and third vertebræ, with destruction of the intervertebral cartilage and ulceration of the anterior surface of the bodies of both vertebræ. There is no displacement. The sac of the abscess in its present dried state is about equal in size to a large orange. A part of its outer wall is wanting, and through the aperture a hole can be seen in the inner wall leading to the carious vertebræ. The sac is prolonged downwards as a thin and now impervious cord to the brim of the pelvis.

738. Seven Cervical and seven upper Dorsal Vertebræ, exhibiting changes due to strumous ulceration. The periosteum is separated from the bodies of the three lower cervical and five upper dorsal vertebræ, and considerable parts of some of these have been removed by ulceration. Some of the cavities thus formed are confined to the bodies, others encroach on the articulating surface and interarticular cartilage. New bone has been deposited on the bodies of the cervical and on the sides of the dorsal vertebræ, and also on the ribs, so as to lead in some cases to anchylosis. There is a slight forward curve in the cervical region.

739. The four lower Dorsal and the two upper Lumbar Vertebræ, showing extensive destruction of the bodies of all except the lowest from ulceration. There is no displacement or curvature.

740.

741.

OSSEOUS ANCHYLOSIS AND FORMATION OF NEW BONE ON VERTEBRÆ.

742. The posterior portion of the base of a Skull with the cervical vertebræ. The atlas is firmly anchylosed to the occipital bone and to the axis. The cervical vertebræ from the third to the seventh are firmly united to each other by bone at every point, and the uppermost one is joined to the axis. The odontoid process is also united by its apex to the margin of the foramen magnum. A considerable amount of new bone with smooth exterior has been formed around the occipito-atloid and atlo-axoid articulations. There is no appearance of a fracture.

743. A portion of an Occipital Bone and the Atlas. The two bones are firmly united by osseous anchylosis at their articular surfaces, and also slightly along the adjacent borders. The atlas is slightly rotated to the left.

744. Five Dorsal Vertebræ firmly united together by dense masses of new bone on the right side of the bodies, forming bridges over the intervertebral cartilages. There is also a single mass between the two upper vertebræ on the left side, and part of another growing from the edge of the lowest. The edges of the bodies are sharp and prominent; the surfaces are perforated by numerous apertures for vessels.

745. Two Dorsal Vertebræ, firmly anchylosed by a deposit of new bone on the anterior surface of the bodies, bridging over the intervertebral disc.

746. Three Lumbar Vertebræ, anchylosed together by masses of dense new bone, which have been deposited on the anterior surfaces of the bodies, more especially opposite the intervertebral discs.

747. A section through five Dorsal Vertebræ. The two upper and three lower vertebræ are firmly anchylosed by bridges of new bone arching over the intervertebral cartilages. Union is not complete between the second and third vertebræ.

748.

DISPLACEMENTS DUE TO DISEASE.

749. A section of the upper part of a Spinal Column and the base of the Occipital Bone, with the spinal cord and medulla oblongata *in situ*. The atlas with the occipital bone is carried forwards, causing a considerable bend in the spinal canal, and consequent compression of the upper part of the cord. The odontoid process was found to be separated by caries from the axis, and was carried forwards with the atlas and skull. There was much imperfectly matured suppuration round the atlas and axis.

The patient was a butler, past middle age, who was supposed for some months to have rheumatism of the neck and shoulders. There was deep-seated swelling in the nape of the neck, and stiffness. The head then dropped forwards; first one arm and then the other became paralysed; this was followed by paralysis of the lower extremities, and for some weeks before his death there was much dyspnœa.

Presented by A. Shaw, Esq.

750.

751.

ANGULAR CURVATURE.

752. Section of the Spine in the dorsal region, with the chord *in situ*. The bodies of two of the vertebræ are almost destroyed by caries, and the one next below is extensively diseased, and is brought into contact with the remains of the anterior surface of the body of the vertebra next but one above it, causing an angular curvature of the spine, with considerable compression of the cord. In front there is an abscess raising the pleura and communicating through the carious bodies with the spinal canal.

753. Section of the Spinal Column in the lumbar and lower dorsal region, with the chord *in situ*. The bodies of nine or ten of the vertebræ are extensively destroyed by caries, about five being almost entirely absent. There is a corresponding angular curvature of the spine, with great compression of the chord.

754. Seven Dorsal Vertebræ, exhibiting an angular curvature, with the concavity forwards, the result of almost complete absorption of the bodies of three vertebræ. All except the highest are extensively ulcerated, and are united by new bone formed at their adjacent edges. The articular surfaces and transverse and spinous processes are anchylosed.

755. Nine Dorsal Vertebræ, presenting angular curvatures at two points, the result of partial absorption from caries of two adjacent vertebræ opposite the angle of each curve. The spinal canal is not narrowed. There is osseous union between the spinous processes and articular surfaces where the curves are greatest.

756. The Dorsal and upper Lumbar Vertebræ of a young person, exhibiting an extremely acute angular curvature in the lower dorsal region of the spine. The bodies of eleven vertebræ have been destroyed to a varying extent by ulceration, and the remaining portions have become fused by osseous anchylosis. There is a slight secondary curve in the upper dorsal region. The spines opposite the point of the curve are atrophied. Portions of three ribs on the right side and one on the left, all of which are firmly anchylosed to the vertebræ, still remain attached.

757. The bodies of three Dorsal Vertebræ and the remains of three others. The latter have become fused together, and were evidently situated at the apex of an angular curvature. All the vertebræ are anchylosed between the bodies, articular surfaces, laminæ and spinous processes, the latter at the base only. A portion of a rib, with its head much enlarged, is attached.

758. A portion of the Spine of a young person, with parts of the ribs attached. The bodies of two vertebræ have been destroyed by ulceration, and an abscess the size of an orange has formed behind the pleura surrounding the diseased bones. There is an angular curvature of the spine opposite the site of the disease (mid dorsal region). The spines are widely separated below the angle.

759. The Dorsal Vertebræ from the fifth to the eleventh, from a case of strumous ulceration of the vertebræ, which resulted in angular curvature. The bodies of the seventh, eighth, ninth, and tenth are enclosed in the sac of an abscess, and are undergoing ulceration. Those of the eighth and ninth are almost entirely removed, and while the posterior parts of these vertebræ remain entire and preserve the length of the column behind, the vacancy caused by

the removal of the anterior parts of their bodies is nearly filled up by the falling together of the seventh and tenth in front. Hence there results a considerable curvature with projection of the spinous process of the eighth vertebra backwards, as well as an interval of an inch between the spinous processes of the eighth and ninth vertebræ posteriorly. The heads of the eighth and ninth ribs are also enclosed in the abscess and involved in the ulcerative process.

760. Nine lower Dorsal and one Lumbar Vertebræ, showing a nearly rectangular curvature opposite the spine of the eighth dorsal. The bodies of the dorsal vertebræ from the fifth to the tenth are in great part absorbed. The anterior surface of the eleventh is ulcerated deeply; that of the last dorsal is rough and porous. There is anchylosis between some of the articular surfaces.

761. Skeleton of a female child affected with angular curvature of the Spinal Column. The upper dorsal vertebræ and those of the lumbar region meet at about a right angle in the lower dorsal region, where the bodies of so many vertebræ have been partially or entirely removed by previous ulceration that the body of the sixth dorsal nearly meets that of the second lumbar. The body of the seventh dorsal, though only one-third of its natural size, still remains separate and in position, but the remains of the bodies of the other intermediate vertebræ are anchylosed so as to form one solid wedge of bone between the bodies of the seventh dorsal and second lumbar. The posterior parts of the vertebræ form a considerable projection in the back, although this deformity is very much dimished by almost complete absorptiou of the spinous processes of the most prominent of the vertebræ, and the ridge of spines is curved and not angular. The transverse and articulating surfaces of the most prominent vertebræ, as well as their arches, are much atrophied, and some are anchylosed together. There is a compensatory curve forward of the lumbar vertebræ, and a tertiary alteration backwards in the direction of the sacrum. The spine of the lumbar vertebræ and sacrum are thus brought into contact. The six upper dorsal vertebræ are convex anteriorly; their spines project upwards instead of downwards, and the transverse processes of the three upper dorsal vertebræ are larger than the rest, and project more backward than natural. The thorax is very considerably shortened in its vertical dimensions, while the sternum has its lower part thrown so far forwards that the ensiform cartilage is by far the most prominent part of the body, and the chest is elongated from before backwards to nearly twice its natural dimensions. The upper ribs are rounder in shape, and describe considerable curves posteriorly; they also have a direction upwards at this point, so that the third rib touches the clavicles. The lower ribs are flattened; they curve upwards from the vertebræ involved in the disease, and then pass nearly straight to their cartilages, so that the lower part of the chest is much flattened laterally. Some of these lower ribs overlap their neighbours above, and all the ribs are closer together than natural. The venter scapulæ is more hollow than normal; the fingers hang as low as the knees. The pelvis is roomy, the upper part is tilted forwards. The space between the ensiform cartilage and the pelvis is shortened.

762. A part of the Spine and Thorax, showing marked deformities, the result of angular curvature. The bodies of all the dorsal vertebræ are very extensively ulcerated, those of the fifth, sixth, and seventh being completely destroyed. The ribs are in contact laterally; in front their ends are raised, following the cartilages and sternum, which are arched from side to side, a second and wider arch expanding opposite the sixth and seventh costal cartilages.

763.

LATERAL CURVATURE.

764. The two lower Dorsal and the Lumbar Vertebræ, showing a lateral curvature to the right, greatest opposite the body of the third lumbar vertebra, and an antero-posterior curvature greatest opposite the body of the second lumbar vertebra. The bodies are rotated so that their anterior surfaces are directed toward the convexity of the curve, those at its apex being wedge-shaped and rotated to the greatest degree. Bridges of new bone have been formed across the intervertebral discs, and large masses of osseous growth unite the bodies together at their articular surfaces and spinous processes. On the convexity of the curve the transverse processes are atrophied, on the concavity they are hypertrophied. The intervertebral foramina are large, and the spinal canal does not appear to be narrowed.

765. Seven Dorsal Vertebræ, from a child, showing a double S-shaped lateral curvature. The bodies are rotated so that they look towards the convexity of the curvatures, and are altered in shape according to their position in the curves. New bone has been formed around the articular facets of several of the ribs, increasing their area considerably. The curvature of the spines is not so great as that of the bodies.

766. A Spine, Thorax, with the exception of the sternum, and Pelvis. There is a strong lateral curve with the convexity directed to the left, greatest opposite the first lumbar vertebra, and a secondary curve comprising all the dorsal vertebræ, directed toward the right. The bodies of the lumbar vertebræ in the concavity of the curve are considerably narrowed, and are also rotated so that their anterior surfaces are directed toward the convexity, the rotation being most marked in the centre of the curve. There is a slight rotation, in the opposite direction, of the dorsal vertebræ and of the fourth and fifth lumbar. The ribs on the concavity of the dorsal curve are close together, whilst on the convexity the intercostal spaces are wide. A deposit of new bone has taken place along the inferior edges of many of the ribs, particularly about the angles. The pelvis is slightly oblique. Viewed from behind the spinous processes are seen to be much less distorted than the bodies of the vertebræ, owing to the rotation of the latter tending to restore the spines to the middle line.

767. A Spine, Thorax, and Pelvis, showing two well-marked curvatures of the spine, one to the left in the loins, and the other to the right, involving the lower dorsal vertebræ. The bodies of the vertebræ are in each case rotated so that their normal anterior surfaces are directed towards the convexity of the curve; this change is especially noticeable in the lower and most marked of the two curves. On the convexity the bodies are atrophied, whilst on the concavity they are expanded, giving them the shape of a wedge. The first, second, and third intercostal spaces are very wide close to the sternum, but elsewhere they are narrow, except on the convexity of the dorsal curve. The sternum is placed obliquely, and the pelvis also to a slight degree.

768. The Spine and part of the Thorax of an adult. There are three well-marked curvatures, the greatest, with the convexity toward the left, is in the lower dorsal region, where the intervertebral space between the eleventh and twelfth dorsal vertebræ is the most prominent point. Secondary curves to the right project most between the fourth and fifth dorsal and the fifth lumbar vertebra. The vertebræ are rotated on their axes so that the normal anterior surfaces are turned to the convexities of the curves. On the concave sides these are narrowed by absorption; on the convex they are elongated. In the upper dorsal curve the laminæ and transverse processes are larger and wider apart than normal on the convexity, whilst on the concavity they are

closer together and smaller. In the lower dorsal region the spinous processes are included in the concavity, and partake in the absorption, which has lessened the size of the corresponding transverse and zygomatic processes. In the deepest part of this concavity the zygomatic processes are forced close to the root of the spinous processes, and new bone is deposited around them. The lumbar spines overlap and are smoothed off where each touches the adjoining one. The thorax is smaller than natural, the ribs being drawn together, and the perpendicular dimensions diminished. The sternum faces more upwards than forwards, whilst the ensiform cartilage is drawn downwards in the direction of the linea alba: thus the antero-posterior diameter of the thorax is increased. The ribs on the right side are nearly all missing; on the left side the first four ribs are directed upwards, the fifth, sixth, and seventh are nearly horizontal, and the remainder are directed slightly downward.

769. A Spine and Pelvis, showing a very marked curvature to the right and backwards, most prominent opposite the ninth dorsal vertebra, with secondary curves in the cervical and lumbar regions. The thorax projects obliquely forwards to the left, and is flattened from side to side; on the right side the sixth, seventh, and eighth ribs are in contact with the bodies of the vertebræ. Similar changes are seen in the bodies of the vertebræ to those described in preceding specimens.

770. Part of a Thorax and the Ribs. There is a very extreme lateral curvature to the right and backwards opposite the eighth and ninth dorsal vertebræ, with secondary curves in the upper dorsal and lumbar regions. The ribs are in contact with the bones of the vertebræ: the latter have undergone extreme rotation.

771. The Skeleton of a young female. There is a very marked lateral curve to the right in the mid-dorsal region of the spine, with secondary curves in the cervical and lumbar regions. The thorax is much deformed, flattened from side to side, and pointing obliquely to the left. The ribs in the concavity of the principal curve are crowded together; those on the convexity are in contact with the bodies of the vertebræ. The sternum is tilted upwards, and presents a lateral curve, the convexity to the right. The pelvis is placed obliquely, the left iliac crest being the higher. The usual rotation of the bodies of the vertebræ has taken place.

772. The Skeleton of an adult. The inferior maxilla is atrophied and edentulous. The spine presents three lateral curvatures, the principal one in the mid-dorsal region, with the convexity to the right. There are secondary curves in the lumbar and cervical regions. The pelvis is very oblique, the left side being the higher. In other respects the spine resembles others already described. The femora are bowed forward, and the tibiæ inward in the upper third.

773. A Spine and Pelvis, with part of the Thorax. The spine exhibits two very extreme lateral curves in the upper dorsal region. The first is directed to the right, the second to the left. There is a secondary curve to the right in the lower lumbar region. Great deformity and shortening of the spine has resulted, with almost entire obliteration of the intercostal spaces. The cavity of the brim of the pelvis is flattened from side to side, and the pubes prominent.

774. A Thorax and Pelvis, showing lateral curvatures in the mid-dorsal and dorso-lumbar regions, the lower being the most marked, and projecting toward the left side.

775. A portion of a Spine, exhibiting a lateral curvature, with the convexity to the left, in the lower dorsal region. The vertebræ are rotated so that the bodies look toward the convexity of the curve. The curve is greatest opposite the ninth and tenth vertebræ, where, on the right side, the articular surfaces are saddle-shaped and rough at the edges from a deposit of new bone. The left transverse and spinous processes of the lumbar vertebræ are hypertrophied.

From a girl, who died of cancer.

776.

777.

ANTERO-POSTERIOR CURVATURE.

778. The Spine of a child, exhibiting a slight antero-posterior curvature with the convexity backwards. The natural forward curve in the lumbar region is lost. There is no apparent disease of the bodies of the vertebræ.

779. Part of the Occipital Bone, and the Spine, Thorax, and Pelvis of a young child. There is an antero-posterior curvature, moderate in degree, with the convexity backwards, in the upper dorsal region. The lumbar vertebræ are tilted slightly forward, and the pelvis placed very obliquely. The sternum is curved forwards, and the antero-posterior diameter of the chest increased.

780. Part of the Spine and the Thorax of a boy, who suffered from emphysema and bronchial asthma, showing changes in the shape of the thoraic cavity frequently found in the subjects of those diseases. There is an antero-posterior curvature of the spine, with the concavity forwards, most marked in the mid-dorsal region. In the lower dorsal region there is a slight lateral curvature. The sternum is prominent and arched, and there is a depression on each side at the junction of the sixth rib with its cartilage. The cavity of the thorax is enlarged in all its diameters.

MORBID GROWTHS IMPLICATING VERTEBRÆ.

781. Section of a Spine in the dorsal region, with the spinal dura mater. There is an extensive infiltration of cancer into the bodies of the vertebræ and into the spinal canal external to the dura mater. The body of one of the vertebræ is absorbed except a wedge-shaped portion bordering the spinal canal, and the intervertebral discs above and below are in contact in front, producing an angular curvature of the spine.

782. Section of the lumbar portion of a Spine, with the cord *in situ*. Between the transverse processes of the second and fourth vertebræ is a nodulated cancerous mass growing from the sides of the bodies and laminæ on the right side. It extends through into the spinal canal, and forms a mass coating the outer surface of the dura mater.

From a man, aged 28, who died in the Hospital 28th April, 1856. He had large cancerous tumours in the liver, spleen, lungs, skull, humerus, and sternum. His illness, lasting four months, began with pain in the humerus, soon afterwards followed by the appearance of a tumour. A tumour then appeared over the sternum, and one in the right side of the abdomen. He had aching pain in the spine, but no paralysis.

Reported by Dr. Van Der Byl, in *Path. Soc. Trans.*, vol. ix, p. 234.

783. A section of a Spine in the dorsal region. The bodies of the vertebræ have been infiltrated with cancer, and have subsequently been removed by absorption. This change has proceeded to such a degree that the intervertebral discs, which are scarcely affected, have in two distinct places come into apposition.

From a woman, Elizabeth Hill, aged 45, who suffered from scirrhus of the mamma, which underwent atrophy. Lumbar pains, paraplegia, and angular curvature followed. Later on

pulsating tumours appeared in the upper part of the sternum, in the cranium, and ribs. At the post-mortem examination the left femur was found to be fractured, this probably occurred after death, but the bone was infiltrated with cancer.

See *Post Mortem Reg.*, No. 1170, 3rd December, 1860; also article "Cancer," *Holmes's System of Surgery*.

Vide Series V, No. 628.

784. Sections of a portion of a spine from the dorsal region from the same case as No. 2118. The bodies of the vertebræ are infiltrated with cancer and have undergone softening, which has resulted in an antero-posterior curvature with the concavity forwards. The bodies of three vertebræ are considerably diminished in depth anteriorly. The cord is much compressed opposite the apex of the curve.

785.

SERIES VIII.

INJURIES AND DISEASES OF THE BRAIN AND ITS MEMBRANES.

CONGENITAL ABNORMALITIES.

786. The Falx Cerebri and adjoining portion of the Dura Mater. The anterior part of the falx is almost entirely wanting and the posterior part of small size. From a lunatic.

Presented by A. Shaw, Esq.

787. The Brain of an idiot. The cerebrum is very small, its posterior lobes are short and diverge from one another, so that the greater part of the cerebellum is uncovered by them. A large part of the roof of each lateral ventricle is absent, leaving the posterior cornua exposed through an oval opening on each side two inches long by one inch broad.

788. The Head of a child. Projecting from the situation of the occipital protuberance is a large cyst, formed by the dilated fourth ventricle of the brain. It is lined by a layer of ependyma continuous with that of the general ventricular cavities. The mass of brain projecting into the cyst probably represents the corpora quadrigemina, as from the lower part of it the fourth cranial nerve took origin. The fringe loose in the cyst represents the choroid plexus. The cyst was covered externally with skin, and was not ulcerated. The cerebellum is rudimentary.

The child survived its birth six weeks.
Reported and figured in *Path. Soc. Trans.*, vol. xxxiv, p. 18.

Presented by J. B. Sutton, Esq.

INJURIES OF THE BRAIN AND THEIR CONSEQUENCES.

LACERATION AND CONTUSION.

789.

GUNSHOT INJURIES.

790.

HERNIA CEREBRI.

791. The posterior part of the right hemisphere of a Brain. The ragged portion presented through an opening in the skull, caused by a depressed fracture of the parietal bone.

From a boy, who was struck upon the head with a broom-handle. The fragments were elevated and some pieces of bone removed. He died shortly after the injury. The hernia communicated with the lateral sinus.

INJURIES OF THE CEREBRAL MEMBRANES.

INJURIES BY VIOLENCE.

792.

EFFUSION OF BLOOD ON OR BETWEEN THE MEMBRANES.

793. A portion of the cerebral Dura Mater, with a firm circular coagulum five inches in diameter effused on its outer surface. It is an inch thick in the centre, and gradually thins off towards the edges, and is firmly adherent to the membrane. It is stated to have been effused shortly before death.

794. A portion of the cerebral Dura Mater, with blood clot effused on its outer surface. The middle meningeal artery, which has a bristle in it, is seen to be ruptured. From a case of fissured fracture of the skull.

Formation of Blood Cysts and False Membranes between the Meninges.

795. A portion of the cerebral Dura Mater, presenting on its inner surface a layer of coagulum about one-eighth of an inch thick in the middle, becoming thinner at its edges. The clot is five inches long, three inches broad, and corresponds to the outer and upper portions of the left cerebral hemisphere. The free surface of the clot has the form of a delicate membrane, beneath which the rest of the clot, in the recent state, appeared as a reddish jelly. On microscopical examination it was found to consist of fine fibrillæ and altered shrivelled cells. It appears to be identical with the Pachymeningitis Hæmorrhagica or Hæmatoma of the dura mater of Virchow.

From a woman, aged 66, a dissecting-room subject.
Reported by W. H. Flower, Esq., in *Path. Soc. Trans.*, vol. vii, p. 6.

DISEASES OF THE CEREBRAL MEMBRANES.

EFFECTS OF INFLAMMATION (MENINGITIS).

EFFUSION OF LYMPH AND THICKENING.

796. The base of a Brain, with a thick deposit of recent lymph on its surface, most abundant on the right side of the sella turcica. All the nerves which pass into the orbit are enveloped by it, and the third nerves especially are completely embedded in it, and had when fresh a yellowish-brown appearance.

From a young man, aged 20, who presented symptoms of meningitis for fourteen days before his death, and died comatose. He had ptosis of the right eyelid, and the right eyeball was completely motionless.
Related by Sir Charles Bell in his work on the *Nervous System*, 3rd Ed., p. 277.

797. The Pons Varolii, Medulla Oblongata, and Cerebellum. A thick layer of yellow puriform lymph is deposited on the arachnoid covering the medulla, pons, and the adjacent part of the under surface of the cerebellum. The whole of the spinal cord was coated in a similar manner, but the cerebrum was quite free.

From a woman, aged 38, who died 1st January, 1867. Her symptoms began two months before death with severe pain in the loins and down the back of the legs; these pains continued, and she became feverish and delirious, and ultimately sank into a state of stupor. She had severe pain in the neck, but none in the head, and no paralysis.

Reported by Dr. Murchison in *Path. Soc. Trans.*, vol. xviii, p. 14.

798.

TUBERCLE.

799.

TUMOURS AND ALLIED MORBID GROWTHS.

OSSEOUS GROWTHS.

800. The Falx Cerebri and adjoining part of the Dura Mater, with numerous small deposits of bone along each side of the longitudinal sinus, and one much larger in the anterior part of the falx.

The patient, a lady, aged 48, had been insane for two years, and died from rupture of the basilar artery.

801. The Dura Mater covering the cerebral hemisphere, presenting extensive bony deposits on its outer surface, varying from minute points to large irregular patches.

From a woman, aged 48, who died of cancer of the liver. There were no cerebral symptoms.
Reported by W. H. Flower, Esq., in *Path. Soc. Trans.*, vol. viii, p. 26.

802. A piece of Dura Mater, presenting small osseous deposits.

803. A portion of the Falx Cerebri, with an osseous deposit in its anterior extremity.

FIBROUS AND FATTY TUMOURS.

804. A portion of the left Frontal lobe of a Brain, with a growth attached. The growth, about the size of a hazel nut, is situated between the anterior and middle lobes, bounded by adhesions of the arachnoid. It is of a yellow colour, and of about the consistence of soft cheese. Within the capsule surrounding it there were two ounces of turbid brownish-yellow fluid, containing caseous bodies and glistening soft white masses, the largest about equal to a pea in size. The anterior portion of the left middle lobe was firmly adherent to the dura mater. The dura mater was nearly one-third of an inch in thickness, and exhibited a white somewhat glistening and tough section, but appeared to pass gradually into the yellow substance. The bone was healthy: microscopical examination showed that the white glistening bodies consisted of fat. The cheese like portions contained compound granular corpuscles; the thickened portion of the dura mater was composed of cylindrical fibrillæ arranged in parallel bundles.

Reported by Mr. Sibley, *Path. Soc. Trans.*, vol. vii, p. 4.

805. The base and central parts of the Cerebrum. The ventricles are much dilated; in the left lateral one, attached by a short thick pedicle to the inner side of the corpus striatum, is a firm nodulated tumour the size of a large molar tooth. When fresh it was of a bluish-white colour, and on microscopical examination it was found to consist of fibrous tissue. At the base of the brain on the left side extending from the fissure of Sylvius to the pons, the arachnoid and pia mater were thickened and adherent, and there were plates of bone in the arachnoid over the right hemisphere.

From a man, aged 62, who died 2nd January, 1854. In the spring of 1853 he began to suffer from recurrent attacks of pain in the right side of the head, with retching and dimness of vision. December 28th he was seized with difficulty of speech and paralysis of the left arm, which passed off immediately. The next day he was seized with right hemiplegia without impairment of intellect; and on the fourth day he died.

Vide *Path. Soc. Trans.*, vol. v, p. 18.

Presented by A. Shaw, Esq.

CANCER.

806. Part of the Roof of a Skull, with the scalp. There is a circular epitheliomatous ulcer of the latter, five inches in diameter. The bone is exposed to nearly the same extent, and near the centre there is a perforation, through which a fungous growth attached to the outer surface of the dura mater projects. It is situated exactly over the longitudinal sinus, which is not obstructed.

From a young woman, who died in Queen Ward, February, 1860, under the care of Mr. Mitchell Henry.

807. A portion of the Roof of a Skull, with the corresponding part of the Dura Mater detached. Attached to the outer surface of the dura mater is a circular nodule of cancer about one and half inches in diameter, corresponding to which is a perforation in the bone of the same size; it is situated in the right fronto-parietal suture. The diplöe is absorbed to a greater extent than either the outer or the inner tables.

From a woman, who died of cancer in the breast. There were no cerebral symptoms.

808. A portion of the occipital part of the Dura Mater, with a small cancerous nodule growing from its inner surface and shreddy growths attached to its outer surface.

From the same case as Nos. 560 and 582.

809. A portion of the Dura Mater, on the outer surface of which are several nodules of encephaloid disease. The three largest are about three-quarters of an inch in diameter, of soft white texture, and uneven on their surfaces where they encroached upon the bone. At the lower part of the specimen two of them are cut across, and it may be seen that the small one is entirely contained within the substance of the membrane.

810. The Cerebral Dura Mater, with part of the Parietal Bone, which is itself thickened and infiltrated with cancer. Growing from the outer surface of the dura mater are large masses of epithelioma. The inner surface remains unaffected.

811. A portion of the left Hemisphere of a Cerebrum, with the Dura Mater. The dura mater over a space five inches in diameter is much thickened by cancerous infiltration into its substance, and its outer surface roughened and nodulated. The anterior part of the left hemisphere of the brain is adherent to the dura mater, and the cancerous infiltration extends for a short distance into the cerebral substance. At a depth of upwards of an inch from the surface is the cavity of an abscess the size of a large walnut, surrounded by a layer of indurated tissue. The bone corresponding to the infiltrated dura mater was necrosed, and there was a sloughy cancerous ulcer of the scalp. On microscopical examination the morbid growth presents the characters of epithelioma.

From a woman, aged 25, who died 27th October, 1859, in Queen Ward. The disease was of three years' duration.

Post Mortem Reg., 1017.

812. The anterior part of a left Cerebral Hemisphere, with the corresponding parts of the frontal and parietal bones. A portion of the frontal bone is destroyed by cancerous infiltration and ulceration. The dura mater is thickened by cancerous deposit, and at one point perforated, the infiltration extending for a short distance into the brain substance. The disease began in the skin of the forehead.

813. A portion of the left half of a Head, divided vertically, showing a large cauliflower-like growth, which has perforated the skull and come into immediate contact with the dura mater. The section shows the extent of the growth. Microscopically the dura mater presented evidences of infiltration by the tumour, which was of an epitheliomatous nature.

The patient, a female, aged 61 years, was admitted into the Hospital in November, 1873, with a history of the tumour having been noticed for eight months. She died the following autumn.

Vide *Path. Soc. Trans.*, xxvi, p. 187.

Presented by J. W. Hulke, Esq., F.R.S.

814. The remaining portion of the same half of the Head.

815. A portion of the Cerebral Dura Mater, with the longitudinal sinus laid open from within. On the outer surface of the membrane an ulcerated surface with well defined margins is seen. The disease was secondary to a cancerous growth in the scalp.

Presented by Mitchell Henry, Esq.

816. A portion of a Skull Cap, with the Dura Mater and Perieranium attached. The dura mater is enormously thickened by a cancerous infiltration into its inner layer, the outer layer next the bone remaining unaffected.

SARCOMA.

817. The Cerebral Hemispheres, somewhat widely separated in front by an irregularly lobulated tumour the size of a small orange, which is situated between them and embedded in each side in a hollow in their substance. The tumour lies immediately above the corpus callosum, extending forward to within an inch of its anterior band. The growth is separable from the substance of the brain by a layer of pia mater, and projects more into the right than the left hemisphere, causing almost complete atrophy of the convolutions in this region. In the fresh state the tumour was moderately firm, whitish, opaque, vascular, and much resembled the white matter of the brain in appearance. Microscopically it was composed of round and oval cells embedded in granular imperfectly fibrillated stroma. In some places spindle cells were present.

Reported by Dr. Cayley, *Path. Soc. Trans.*, vol. xxvi, p. 1.

TUMOURS OF UNCERTAIN NATURE.

818. A section of the Pons, Medulla, and Cerebellum. Growing from the floor of the fourth ventricle throughout its whole extent, and completely filling up the interval between the back of the pons, medulla, and the cerebellum, is a soft ragged mass ending in long villous processes. Smaller growths of similar character are seen attached to the under surface of the cerebellum. A microscopical examination made after the preparation had been in spirit many years showed that the growth consisted of long villous processes crowded with round nucleated cells; these appeared to spring entirely from the pia mater and ependyma of the ventricles, and not to involve the brain tissue. It is stated that no symptoms whatever were produced by the growth.

DISEASES OF THE BRAIN.

ATROPHY OF PORTIONS OF THE BRAIN.

819. The central parts of the Brain, with the Cerebellum and Medulla. The left lobe of the cerebellum and the left corpora quadrigemina are considerably smaller than on the right side, but otherwise apparently healthy. There was no corresponding difference in the two halves of the skull.

The patient was a girl, aged 4 years, who died 28th October, 1845. She was the child of phthisical parents, but though delicate had no serious illness or any head symptom till the age of 3, when she had an attack of intermittent fever. A month after her recovery from this she awoke one morning with her face drawn to one side, and had loss of power in the left arm and leg, from which she gradually but not completely recovered. Three months later the right leg got weak, and she became subject to attacks of vertigo and fits of uncontrollable laughter. Her appearance became that of an idiot, and she had converging strabismus. On 27th October she had convulsive twitchings of the face and extremities and the left eye became permanently turned inwards. The next day she died in a fit of general convulsions.

Reported in Dr. West's *Diseases of Infancy and Childhood*, p. 141, 4th Ed.

See Series X, Nos. 881, 882, 883.

EFFUSION OF BLOOD UPON THE SURFACE AND INTO THE SUBSTANCE OF THE BRAIN.

820. The Crura Cerebri, Pons, and Medulla Oblongata, from a case of apoplexy. A section through the pons shows blood effused into both lateral halves, the right side being chiefly affected; the hæmorrhage extends forwards into the crura cerebri.

821. The Medulla Oblongata and Pons Varolii bisected. In the central part of the latter, extending from the anterior wall of the fourth ventricle obliquely forwards and downwards, is an apoplectic clot of oval shape an inch in length. The layer of brain tissue round it appears to be indurated and stained.

From a pregnant woman, aged 34, who died in 1847. The kidneys were diseased. The basilar artery was atheromatous.

822. The left Optic Thalamus and part of the Cerebral Lobes. In the former is a small cyst, the walls of which are stained of a chocolate-brown colour.

From a woman, who died of softening of the brain.

823.

EFFECTS OF INFLAMMATION (CEREBRITIS).

ABSCESS.

824. The right half of a Cerebellum and Pons, with the right Temporal Bone. In the right half of the cerebellum immediately beneath the surface is the cavity of an abscess, which in the recent state was filled with thick greenish pus. There is a large cavity in the petrous bone, communicating with the tympanum and encroaching on the labyrinth, which was also filled with pus. The membrana tympani was perforated. There was no communication between the abscess in the bone and that in the cerebellum.

From a man, aged 42, who died in the Hospital 30th November, 1865. He had had a discharge from the ear since childhood. Nine weeks before death he was attacked by violent pain on the top of the head and vomiting. The pain recurred in severe paroxysms every day; after one of these attacks he became comatose and died. The abscess appeared to have burst before death into the cavity of the arachnoid.

Reported by Dr. Cayley in *Path. Soc. Trans.*, vol. xvii.

Vide No. 811.

825. 826.

827.

SOFTENING.

828. A section of the Pons Varolii and Cerebellum. In the centre of the right half of the pons is a circumscribed patch of red softening, the brain tissue being here in part broken down. It occupies the whole thickness of the pons, reaching from the under surface nearly to the fourth ventricle. On microscopical examination it was found to consist of brain tissue mixed up with numerous compound granular cells.

From a woman, aged 19, who died in the Hospital 23rd June, 1853, after eleven days' illness, of acute tuberculosis. She was very delirious, and at last sank into a state of coma. No paralysis was observed.
Med. Reg., No. 100.

TUMOURS AND ALLIED MORBID GROWTHS.

TUBERCULAR DEPOSITS.

829. The right half of a Cerebrum and Pons. In the posterior extremity of the latter near the outer surface is a large cavity partly filled with a broken-down cheesy mass.

830. Part of a right Cerebral Hemisphere, with the Pons Medulla and part of the Cerebellum. Embedded in the middle of the right side of the pons is a firm yellow cheesy nodule, half an inch in diameter. There is a similar nodule about the size of a pea in the grey matter of the cerebral convolutions. The brain contained numerous other tuberculous deposits, and there was one of much larger size in the cerebellum.

CALCAREOUS FORMATIONS.

831.

CORPORA AMYLACEA.

832. The upper part of a right Cerebral Hemisphere. At the bottom of one of the sulci, and imbedded in the substance of the brain, is a globular tumour about an inch in diameter; it is situated at the upper surface of the hemisphere at the junction of the middle with the posterior third, about one and a half inch from the longitudinal fissure. It appears to have originated in the pia mater, and is slightly adherent to the brain substance. When recent it was very firm, white, and translucent, resembling fœtal cartilage. On microscopical examination it was found to consist of a wax-like structureless hyaline substance, containing numerous minute oil globules, infiltrated through a delicate network of fibrillated tissue. It gave a well-marked amyloid reaction with iodine and sulphuric acid.

From a man, aged 19, who died 28th August, 1860, of tubercular disease of the lungs and larynx, after an illness of twelve months. He had no head symptoms.
Reported by Dr. Murchison in *Path. Soc. Trans.*, vol. xiii, p. 2.

FIBROUS TUMOURS.

833. The base and central parts of a Cerebrum. In the left lateral ventricle, attached by a short thick pedicle to the inner side of the corpus striatum, is a firm nodulated tumour the size of a molar tooth. When fresh it was of a bluish-white colour, and on microscopical examination was found to consist of fibrous tissue. Both the lateral ventricles are dilated. At the base of the brain on the left side, extending from the fissure of Sylvius to the pons varolii, the arachnoid and pia mater were thickened and adherent, and there were plates of bone in the arachnoid over the right hemisphere.

From a man, aged 62, who died 2nd January, 1854. In the spring of 1853 he began to suffer from recurrent attacks of pain in the right side of the head, with retching and dimness of vision. On 28th December he was seized with difficulty of speech and paralysis of the left

arm; these symptoms quickly passed off. On the following day he was attacked with right hemiplegia, without impairment of intellect; and on the fourth day he died.

Vide *Path. Soc. Trans.*, vol. xviii.

Presented by A. Shaw, Esq.

FATTY TUMOURS.

834. A Cerebellum, with the Pons and Medulla and a portion of the Cerebral Peduncles. Occupying the position of the superior cerebellar peduncles is a fatty growth. It is roughly wedge-shaped, the base, one and a half inch wide, being turned backwards. The surrounding parts are not infiltrated by the growth.

SARCOMA.

835. Part of a left Cerebral Hemisphere, having embedded in its centre a spindle-celled sarcoma the size of a large walnut; also four smaller tumours of similar nature detached from different parts of the same brain.

From a woman, aged 42, who thirteen months before her death had undergone amputation of the left leg for spindle-celled sarcoma of the tibia. This is also preserved in the Museum. Series V, No. 551. Twelve months after the operation she was attacked by severe neuralgia, first of the phrenic, then of the sciatic and supra-orbital nerves. This was followed by paralysis of the right arm, dysphagia, paralysis of the bladder and rectum, then coma. She died 23rd March, 1868.

Reported in *Path. Soc. Trans.*, vol. xix, p. 33.

Presented by T. Carr Jackson, Esq.

836. Two portions of the Cerebral Hemispheres, which present numerous melanotic tumours, some embedded in the cerebral substance, others growing from the surface.

From a man, whose eyeball had been extirpated for melanotic sarcoma some months before his death.

Presented by J. W. Hulke, Esq., F.R.S.

837. The left half of a Brain. Projecting from the under surface of the middle lobe of the cerebrum is a tumour of oval shape about two and a half inches in long diameter. The corpus striatum is displaced by it upwards and to the right, and the cavity of the left lateral ventricle much encroached upon. The tumour in its recent state was firm towards the centre and softer at the circumference. On section it was partly semi-transparent and bluish, partly opaque and yellow. On microscopic examination it was found to consist of fibres, some of which were arranged in long bundles, others in a reticulated manner. There were also large numbers of nuclei, roundish and stellate, closely packed together. In the opaque spots there were numbers of fatty granules. The fibres themselves were also nucleated.

From a man, aged 60, who died 17th February, 1863.

838. The Medulla Oblongata, Pons, and Crura Cerebri. Extending from the corpora quadrigemina on the right side nearly to the cerebellum, and occupying the right processus ad testes, is a gliomatous tumour the size of a large walnut. It forms a projection into the fourth ventricle, and involves all the deeper parts of the right side of the pons, the right half of the valve of Vieussens, and the fibres of origin of the right fourth and fifth nerves. The corpora quadrigemina form little elevations on its upper surface. When recent the tumour was of a whitish colour, and closely resembled the surrounding brain substance, but was softer. On microscopical examination it was found to consist of a network of delicate nucleated fibres with many free nuclei, and a very large number of compound granular cells with some fragments of nerve tubules.

The patient was a girl, aged 2 years, who died 16th January, 1865. Six months before her death she began to droop the head to the left shoulder. This was followed by perfect rigidity of the left arm and leg, tetanic spasms, and ultimately permanent opisthotonos, with an inclination to the left; both eyes became amaurotic, and the right cornea ulcerated. The flexors of the right extremities also became rigid. No other lesion was found.

Reported by Dr. Cayley, in *Path. Soc. Trans.*, vol. xvi, p. 22.

CANCER.

839. The posterior half of a right Cerebral Hemisphere. Embedded in the white substance of the posterior lobe is a round mass of colloid cancer two inches in diameter. There were numerous nodules of colloid scattered through both lungs, and a large mass in the apex of the left one.

From a man, aged 56, who died 9th December, 1856. He is stated to have had constant hæmoptysis for two years previous to his death. On 29th June, 1856, he was suddenly seized with left hemiplegia, which remained permanent. Before death he became comatose.

Med. Reg., Male, vol. iii, No. 345.

840. The Pons Varolii and adjacent portions of the Cerebral Peduncles, of which the right is seen to be occupied by a growth described as cancerous. A portion of it has been removed, and is now seen attached to the cruss.

841. 842.

CYSTS.

843. The left Lobe of a Cerebellum and the Pons. Attached to the inferior surface of the left peduncle of the cerebellum close to its junction with the pons is a tumour the size of a pigeon's egg, consisting of a cyst with a distinct lining membrane, invested outside by a layer resembling convoluted brain substance. When recent it was filled with a fluid the colour of urine. The fifth nerve, attenuated and flattened, appears to issue from the fundus of the tumour, and can be traced along its walls up to within half an inch of its origin. Both the portio dura and mollis of the seventh nerve are lost in the tumour from within a quarter of an inch of their origin as far as the meatus internus.

From a woman, who died in February, 1829. About two years and six months before her death she began to suffer from a burning sensation on the left side of the tip of the tongue; this soon extended over all that side of the tongue and face, and was accompanied by almost total loss of the sense of touch in this region. She also quite lost the sense of taste on this side of the tongue. There was at this time no facial paralysis. In September, 1828, when after a long interval she again came under notice, it was found that the muscles of the left side of the face were completely paralysed. She had ptosis of the left eye, the face was drawn to the right, the tongue protruded to the left, and she was quite deaf with the left ear. Her intellect became confused, her breathing difficult, deglutition impaired, speech indistinct, and she died apparently from impairment to the functions of deglutition and respiration.

Related by Sir Charles Bell in his work on the *Nervous System*, p. 352, 3rd Ed., with an engraving, pl. 5.

844.

VASCULAR GROWTHS.

845. The posterior extremity of a left Cerebral Hemisphere, bisected. Embedded in the grey matter of the brain is a tumour the size of a walnut, partly composed of a cyst an inch in diameter, lined with laminated fibrin, and partly of a congeries of sacculated and dilated veins, which are continuous with similarly dilated veins in the pia mater.

The patient was a man, aged 38, of intemperate habits, who died in a state of coma, April, 1871, after a series of fits, with violent delirium in the intervals. These symptoms followed a drinking bout. He had been subject to fits since the age of 13.

Path. Soc. Trans., vol. xxii.

Presented by Henry Morris, Esq.

846.

PAPILLOMATA.

847. A section of the Pons, Medulla, and Cerebellum. Growing from the floor of the fourth ventricle throughout its whole length, and completely filling up the interval between the back of the pons, medulla, and cerebellum is a soft ragged mass, ending in long villous processes. Smaller growths of a similar character are seen attached to the under surface of the cerebellum. It is stated that no symptoms whatever were produced by the growth.

A microscopical examination made after the preparation had been in spirit many years showed that the growth consisted of long branched villous processes crowded with round nucleated cells; these appeared to spring entirely from the pia mater and ependyma of the ventricles, and not to involve the brain tissue.

TUMOURS OF UNCERTAIN NATURE.

848. A Tumour situated on the left fifth nerve. "From a case referred to in Sir Charles Bell's work on the *Nervous System*" (not identified).

Presented by A. Shaw, Esq.

ENTOZOA.

849. Head of a sheep affected with "gid." The upper part of the skull has been removed in order to show a large cavity in the left hemisphere of the brain. The so-called hydatid (*cœnurus cerebralis*) has been removed from the cyst, and is seen at the bottom of the jar.

Presented by Dr. T. Spencer Cobbold, F.R.S.

850.

DISEASES OF THE VENTRICLES OF THE BRAIN AND CHOROID PLEXUS.

HYDROCEPHALUS.

851. A vertical section of the right half of the Head of a hydrocephalic child, with the brain *in situ*. The lateral ventricle is dilated to such an extreme degree that it measures nearly eight inches in each diameter; it communicates with its fellow through an opening the size of an orange. The cerebral tissue is so attenuated that in some places it barely measures one-eighth of an inch in thickness. The cerebellum is of normal size. For the other half of the skull, dried, *vide* No. 345.

Vide also Series XLII.

HYDROCEPHALIC SKULLS.

852. The Skeleton of a child with a hydrocephalic skull.

853. A similar specimen.

See No. 345.

853A. The skull of a hydrocephalic child.

853B. A similar specimen.

SERIES IX.

INJURIES AND DISEASES OF THE SPINAL CORD AND ITS MEMBRANES.

ABNORMALITIES OF MEMBRANE AND CORD.

854.

855. For Spina Bifida, *vide* Series VII, Nos. 725, 726, 727, 728.

INJURIES AND DISEASES OF THE MEMBRANES.

EFFUSION OF BLOOD.

856. A Spinal Cord and its Membranes. The surface of the cord throughout its whole extent is surrounded by a black coagulum situated beneath the arachnoid. Above, it extended along the base of the brain as far as the optic tracts, and it passed for some distance along the spinal nerves. A branch of the posterior cerebellar artery on the left side was found to be ruptured, and all the intercranial arteries were more or less atheromatous.

From a woman, aged 28, who died in the Hospital, 21st March, 1851. Sixteen months previously she was attacked by severe pain in the head, followed by right hemiplegia, from which she gradually recovered, but remained subject to headaches. In the beginning of March, 1851, the pain returned, affecting chiefly the left side of the forehead, and she again became paralysed. On admission, 15th March, there was right hemiplegia and left facial paralysis, both incomplete, and severe supra-orbital pain. This was followed by internal strabismus of the left eye, with great impairment of vision, and immobility of the pupil, and partial loss of sensation on the left side of the face. On the 19th she was suddenly seized with a violent epileptic fit, and shortly afterwards by a second, which was attended with opisthotonos. She partially recovered, but the opisthotonos continued. She became delirious occasionally, screaming and groaning, and had exacerbations of the opisthotonos. She died twenty hours after the first fit. The fourth ventricle of the brain was found filled with coagulated blood. The fornix, corpus callosum, and optic thalami were much softened. The kidneys were granular, and the heart hypertrophied.

EFFECTS OF INFLAMMATION (SPINAL MENINGITIS).

EFFUSION OF LYMPH.

857. 858.

TUMOURS AND ALLIED MORBID GROWTHS.

859.

CARTILAGINOUS OR BONE-LIKE PLATES.

860. A Spinal Cord and its Membranes. The arachnoid investing the cord presents numerous small opaque plates of cartilaginous consistence, and also some slender fibres of firm connective tissue which united the two surfaces of the arachnoid. In the upper part of the cord is seen a longitudinal incision; here the cord was softer than elsewhere.

From an old man, who died six weeks after the commencement of paraplegia. The other organs were normal.

861.

FIBROUS TUMOURS.

862. A Spinal Cord and its Membranes, with the Sacral Plexus and Sciatic Nerves of the left side. A large number of oval and round tumours, varying in size from a hemp seed to a walnut, are seen on the commencement of the spinal nerves both within and without the dura mater; they are most numerous in the lumbar and cervical regions. One of them, the size of a large nut, situated on the third cervical nerve on the left side, has greatly compressed the cord. This tumour with many of the others contains a cyst in the centre. On the anterior crural nerve is a tumour the size of a very large orange; it consists of a dense fibrous capsule continuous with the sheath of the nerve, investing a tumour having the character of a fibro-cellular growth interspersed with cysts. The fibrous portion consists of bands of wavy fibrous tissue arranged chiefly parallel to the surface. Of the cysts the largest is the size of an hen's egg, the smaller are almost microscopical; they have smooth fibrous walls, and were filled with clear fluid; the largest contained a partially organised blood clot; another contained a colloid looking mass of a similar nature, being composed of stellate fibrils, supporting a fluid containing blood cells. Large neuromata were also found on other nerves both of the upper and lower extremities.

From a man, aged 45, a coach painter, who died in the Hospital 11th May, 1861. Four years before he began to lose power in his legs. On admission in April there was neither voluntary motion nor sensation in the lower extremities, which were drawn up and firmly contracted on the abdomen; they admitted however of being straightened, but after a short interval were again drawn up. The upper extremities were also bent, but voluntary motion and sensation in them, though much impaired, were not quite lost. He had paralysis of the rectum and bladder, and large bed sores. He died rather suddenly. All the viscera were normal.

Reported by W. S. Sibley, Esq., in *Med. and Chir. Soc. Trans.* vol. xlix, p. 39.

TUBERCLE.

863.

CANCER.

864.

PSAMMOMA.

865. The lower part of the dorsal region of a Spinal Cord. Attached to the inner surface of the dura mater on the left side, corresponding to the interval between the tenth and eleventh vertebra, is an oval tumour, with the long diameter one and a quarter inches, and the short one five lines; its surface is smooth, its substance is very white and soft, and on microscopical examination was found to consist of nucleated fibres and fibre cells, arranged in concentric rings, in the centre of many of which was a shining calcified mass. The tumour agrees with the psammona of Virchow. The spinal cord at this point is compressed and softened.

From a woman, aged 46, who died in the Hospital, 7th March, 1865, of paraplegia. Her symptoms began twelve months before, with pain in the left iliac region, followed in six months by formication and gradual loss of power and sensation in the legs, beginning in the left.

Reported by Dr. Cayley, in *Path. Soc. Trans.*, vol. xvi, p. 21.

INJURIES AND DISEASES OF THE SPINAL CORD.

LACERATION AND EFFUSION OF BLOOD.

866.

SOFTENING.

867.

DILATATION OF THE CENTRAL CANAL.

868.

EFFECTS OF PRESSURE.

The results of injury.

869. A Spinal Cord and its Membranes. The first part of the cord, corresponding to the fifth dorsal vertebra, for a length of two inches, is much diminished in bulk, and appears to be converted into loose connective tissue, with a tract of nervous matter along its posterior part which connects the healthy part of the cord above and below.

From a man, who sustained fracture of the fifth dorsal vertebra twenty-one years before. The lower extremities were paralysed after the accident, but sensation and motion returned in the course of a few months. After leading an active live for seventeen years, the paraplegia returned, and after lingering five years, he died from the effects of it. The spinal column will be found in Series IX, No. 724. The case is narrated by A. Shaw, Esq., in *Holmes's System of Surgery*, vol. ii: Article, Injuries of the Back.

870. A portion of the dorsal region of a Spinal Cord and its Membranes, exhibiting degeneration of its structure produced by fracture and displacement of the vertebræ. The corresponding vertebræ will be found Series IX, No. 728.

The case is narrated by A. Shaw, Esq., in *Holmes's System of Surgery*, vol. ii, and an engraving is given.

Hydatids.

871. Four of the Dorsal Vertebræ with the spinal canal laid open behind. On the right side the pleura is raised from the ends of the ribs and sides of the bodies of two of the vertebræ by a cyst, which extends into the spinal canal through an opening produced by erosion of the sides of the body of a vertebra and its pedicle. Here the cord is much pressed upon. The cyst was formed by a hydatid. Two secondary cysts, which were contained in the large one, are suspended in the same bottle. There was also a large hydatid cyst in the liver.

From a woman, aged 40, who died paraplegic, with bed sores, cystitis, and pyelitis.

EFFECTS OF INFLAMMATION. MYELITIS.

872.

TUMOURS AND ALLIED MORBID GROWTHS.

TUBERCLE.

873. Part of a Spinal Cord, divided longitudinally. Embedded in its upper portion is an opaque yellow cheesy looking tubercular mass, of oval shape, an inch in length, and another one is also seen embedded in the lower portion of the cord.

Presented by W. H. Flower, Esq., F.R.S.

874. Part of a Spinal Cord, divided longitudinally. Embedded in the substance of the cord opposite to the fourth dorsal vertebra is an opaque yellow tubercular mass, one and a half inches in length. It occupies nearly the whole thickness of the cord.

From a boy, aged 4 years, who died of paraplegia of twelve months' duration. There was a similar tubercular deposit in the right lobe of the cerebellum, and the mesenteric glands were enlarged, but there was no tubercle in the lungs or other organs.

875.

876.

SERIES X.

INJURIES AND DISEASES OF NERVES.

ABNORMALITIES.

877.

INJURIES.

BULBOUS ENLARGEMENT AFTER INJURY OR AMPUTATION.

878. Two Large Nerves showing bulbous enlargement at the extremities after amputation.

879. A similar specimen.

See also Series XXXI, No. 2141.

REPAIR AFTER INJURY.

880. The Foreleg of a Cat, dissected, showing the brachial plexus. The median and ulnar nerves were divided during life, and the divided end of the one united to that of the other. Sensibility and motion were completely restored after an interval of ten weeks. The nerves are now seen to be firmly united, a slight swelling marking the point of junction in each.

Presented by J. B. Sutton, Esq.

ATROPHY.

881. The central parts of a Brain. The right optic nerve is much atrophied, and the optic tracts are smaller and flatter than natural.

From a sailor, who died in the Hospital of dysentery contracted in China, where he was exposed to great privations at the siege of Chusan. He suffered from amaurosis, which began to show itself on his voyage home.

882. The central parts of a Brain. The right optic nerve is diminished to one-third the size of the left.

From a woman, aged 52, who died in the Hospital, 13th October, 1858, of cancer of the uterus. The right cornea had been opaque for many years: from what cause is not known. *Post Mortem Reg.*, No. 872.

883. The central parts of a Brain, with both Eyes and Optic Nerves. The left eyeball is completely shrunken, and the left optic nerve much wasted. The eye had been lost from disease twenty years before death.

From a man, who died December, 1858, after an operation.

TUMOURS AND ALLIED MORBID GROWTHS.

FIBROUS TUMOURS.

884. A Posterior Tibial Nerve, with the neurilemma in part removed, presenting a number of globular enlargements on its fibrillæ, varying in size from a hen's egg to a hazel nut, and also others which form merely a circumscribed thickening of the fibrils. One of the tumours contains a cyst. The larger tumours when recent were of a tough elastic consistence, pale red in colour, and the nervous elements of the fibrillæ were obliterated. The small tumours were seen microscopically to consist of a growth within the membrane surrounding the nerve tubules and of corpuscles of irregular shape, though chiefly rounded, without nuclei and of a deep yellow colour.

From a dissecting-room subject.
Reported by Dr. Van der Byl, in *Path. Soc. Trans.*, vol. vi, p. 49.
Vide No. 862.

885. A Forearm and Hand, dissected. On the median, radial, and posterior interosseous nerves there are a vast number of fibrous tumours varying in size from an orange to a pea. The nerves are enlarged, and present nodular prominences throughout their whole length.

Vide Series IX, No. 862.

886.

SARCOMA.

887.

CANCER.

888. A left Great Sciatic Nerve, showing, at its upper part, where the branches of the sacral plexus unite to form the nerve, an oval swelling, slightly nodulated, two and a half inches in length. An incision shows it to consist of the expanded sheath of the nerve filled with the soft flaky matter of epithelioma, which on microscopical examination was found to consist of masses of squamous epithelial cells arranged in parts in concentric laminæ. The morbid deposit also extended above and below into the course of the nerve, infiltrating and in part destroying the nerve fibres.

From a woman, who died of cancer of the uterus, with large secondary deposits in the pelvic glands in contact with the sacral plexus. She had severe sciatic pain, with partial loss of motion in the left lower extremity.
Vide *Path. Soc. Trans.*, vol. ix, p. 11.

Presented by W. H. Flower, Esq., F.R.S.

888A.

CHANGES IN NERVES IN LEPRA ANÆSTHETICA.

889. Portions of the Posterior Tibial and Median Nerves. They are enlarged, and on microscopic examination there was found to be a great increase in the connective tissue surrounding the funiculi, with wasting of the nerve tubules.

From a man, aged 39, a native of Ireland, who died in the Middlesex Hospital, 1868, of anæsthetic leprosy, which he contracted ten years before in Trinidad.
Reported in *Path. Soc. Trans.*, vol. xix, with drawings of the microscopical appearances of the nerves.

890.

SERIES XI.

INJURIES OF THE EYE AND ITS APPENDAGES.

ABNORMALITIES OF THE EYE AND ITS APPENDAGES.

891.

ORBIT.

892. An Eye with its orbit infiltrated with cancer. The parts were removed by operation.

893. A portion of an Epitheloma which involved the face, and has spread into the orbit, causing destruction of the eye.

Presented by C. Moore, Esq.

Vide Nos. 442, 444, 445.

LACHRYMAL GLAND.

HYPERTROPHY.

894.

TUMOURS OF THE LACHRYMAL GLAND.

895.

EYELIDS.

ATROPHY.

896.

SYMBLEPHARON.

897.

TUMOURS OF THE EYELIDS.

898.

CONJUNCTIVA.

PTERYGIUM.

899.

CORNEA.

INFLAMMATION AND ITS EFFECTS.

900.

ULCERATION.

901.

STAPHYLOMA.

902.

TUMOURS OF THE CORNEA.

903.

INJURIES OF THE CORNEA.

904.

SCLEROTIC.

THICKENING.

905. A contracted Eye, showing extreme thickening of the sclerotic.

STAPHYLOMA.

906.

TUMOURS OF THE SCLEROTIC.

907.

IRIS.

IRITIS AND ITS EFFECTS.

908. A section of an Eye, showing atrophy of the iris and loss of pigment.

909. Section of an Eye, showing the effects of sympathetic ophthalmia. The iris is much thickened from inflammatory exudation; the retina is also thickened and detached.

SYNECHIA.

910.

TUMOURS OF THE IRIS.

911.

CHOROID.

CALCAREOUS DEGENERATION, AND FORMATION OF BONE.

912.

CHOROIDAL HÆMORRHAGE.

913.

TUMOURS OF THE CHOROID.

MELANOTIC SARCOMA.

914. Section of an Eye, showing a melanotic growth springing from the choroid.

915. Section of an Eye, showing a very large melanotic tumour of the choroid which has burst through the sclerotic, and formed a large growth external to it.

916. Sections of an Eye, showing a melanotic sarcoma growing from the choroid. A large mass of the growth is attached to the eye.

SARCOMA.

917. Sections of an Eye, disorganised by inflammation, and in which a sarcomatous growth has subsequently occurred.

918.

919.

LENS.

CATARACT.

920.

CALCAREOUS DEGENERATION OF THE LENS.

921. Section of an Eye, showing the lens shrivelled and calcareous. The cornea is opaque, and the posterior chamber disorganised by inflammation.

922. A calcareous formation removed from a crystalline lens; also a Cornea from the same eye showing a calcareous deposit.

923. A right Eye. The optic nerve is atrophied to little more than half its normal size. The cornea was clear and normal (it has been dissected away). The iris is completely adherent to the lens, the pupil is closed, and the tissue of the iris degenerated. The lens is displaced, and converted into a hard calcareous mass. The vitreous humour was fluid. The choroid and retina are quite disorganised. Beneath the latter at the posterior part of the eyeball is a mass, about the size of the lens, of an opaque yellowish soft substance; a similar mass was attached to the ciliary process on one side of the lens.

From a man, who had been blind for many years.

VITREOUS HUMOUR.

INFLAMMATION AND ITS EFFECTS.

924. Sections of an Eye, collapsed and disorganised; the vitreous is seen to be white, opaque, and fibrous looking. Also another disorganised and disused eye, showing a crucial mark in front due to the action of the recti muscles.

FOREIGN BODIES.

925.

RETINA.

RETINITIS PIGMENTOSA.

926.

DETACHMENT OF THE RETINA.

927.

TUMOURS OF THE RETINA.

928. 929.

OPTIC NERVE.

ATROPHY.

See Series IX, Nos. 881, 882, 883.

TUMOURS OF THE OPTIC NERVE.

930. Section of an Eye, showing a small growth involving the optic nerve and retina. At one spot it shows a patch of black pigment.

CHANGES IN THE OPTIC NERVE AFTER EXCISION OF THE EYE.

931.

ALTERATIONS IN THE SHAPE AND SIZE OF THE EYE.

932.

933.

SERIES XII.

DISEASES OF THE EAR AND ITS APPENDAGES.

ABNORMALITIES OF THE EAR.

934. Section of the Head of a child, showing a rudimentary condition of the external ear and absence of the auditory meatus.

EXTERNAL EAR.

935. A Tumour growing from the lobe of the ear.

INFLAMMATION OF THE INTERNAL EAR AND ITS EFFECTS.

PERFORATION OF THE MEMBRANA TYMPANI.

936.

MEMBRANOUS BANDS IN THE TYMPANUM.

937.

TYMPANIC ABSCESS.

938.

CARIES OF THE TEMPORAL BONE.

939. 940.

941.

MORBID GROWTHS IN THE EAR.

POLYPI.

942. A Polypus removed from the external auditory meatus of a woman of middle age.

943. A Polypus removed from the external auditory meatus of a girl aged 15.

944. A Temporal Bone, showing a polypus hanging from the external auditory meatus. The roof of the tympanum shows a small area of necrosis.

945. A similar specimen.

Dissected by Mr. Bernard Lawson, 1883.

SERIES XIII.

INJURIES AND DISEASES OF THE HEART AND PERICARDIUM.

ABNORMALITIES OF THE PERICARDIUM.

946.

ABNORMALITIES OF THE HEART.

A. Of the Septa and Walls.

947. The Septum Ventriculorum of an adult Heart. The foramen ovale is only partially closed, and would admit the forefinger.

From a woman, aged 63, who died of cancer of the breast, 25th October, 1858. No symptoms pointed to the presence of the malformation.
P. M. Reg., No. 877.
Vide No. 961.

B. In the Mode of Origin of the Large Vessels.

948. A Fœtal Heart. There is a deficiency in the septum ventriculorum just below the pulmonary valves, so that the pulmonary artery takes origin as much from the left as from the right ventricle, and it is of abnormally large size. The aorta arises from the right ventricle. There is atresia of the pulmonary artery and absence of the pulmonary valves. The ductus arteriosus passes to the right behind the pulmonary artery, instead of to the left. The foramen ovale is nearly closed.

Vide No. 961.

949.

C. Of the Valves.

950. A Fœtal Heart, with the origin of the great vessels. The pulmonary valves are wanting. The right auricle and ventricle, especially the former, are much dilated, and the left ventricle greatly hypertrophied. The foramen ovale and ductus arteriosus are open and normal.

951. The commencement of a Pulmonary Artery. There are four semilunar valves present, three of which are about of the same size and one very much smaller than the rest, both in width and in a vertical diameter.

From a boy, aged 13, who died 21st May, 1857, from the effects of an injury.
P. M. Reg., No. 675.

952. The commencement of a Pulmonary Artery, showing four valves, two being of smaller size than the others.

From a woman, who died of typhus, November, 1868. The tricuspid valve was incompetent, there was incipient cirrhosis of the liver, and the spleen was greatly enlarged, forming a tumour, for which she had twice been an in-patient in the Hospital.

Reported by Dr. Greenhow, in *Path. Soc. Trans.*, vol. xx, p. 98.

953. A portion of an Aorta, showing four semilunar valves.

954. A Left Ventricle and Aorta laid open, showing but two aortic cusps, of nearly equal width. Both coronory arteries are seen to arise behind a single cusp. The valves are slightly atheromatous, and the aorta also shows a slightly raised patch of endarteritis at one of the points of attachment of the cusps.

For other specimens of abnormalities of the valves, *vide* Nos. 1004, 1020.

INJURIES OF THE HEART AND PERICARDIUM.

ECCHYMOSIS.

955.

RUPTURE.

956.

WOUNDS.

957.

INFLAMMATION OF THE PERICARDIUM.

EFFUSION OF LYMPH.

958. A Heart, the surface of which is much reddened, and in part covered with a felt-like layer of recent lymph. On the surface of the right ventricle is a raised white patch.

From Mr. Langstaffe's Collection.

Presented by Mitchell Henry, Esq.

959. A Heart and Pericardium. The serous surfaces are covered with a firmly adherent layer of reticulated lymph. There is an extensive old adhesion between the apex of the left ventricle and the diaphragmatic attachment of the pericardium. The heart itself is greatly enlarged, and there is a large white patch on the surface of the right ventricle.

960. A Heart and Pericardium. The heart is considerably hypertrophied, and the serous surfaces of both the visceral and parietal layers of the pericardium are much thickened, reddened, and covered with a thick ragged layer of recent lymph. Near the left apex is a white patch.

961. A Heart and Pericardium. The opposed surfaces of the pericardium are covered with a thick adherent layer of rough granular lymph, which in the recent state glued them together. The right ventricle is much hypertrophied. In the septum ventriculorum, at its upper part, there is a circular orifice about ten lines in diameter. The pulmonary artery is not more than half its natural size. Neither the foramen ovale nor the ductus arteriosus are pervious.

From a boy, aged 13 years, who died in the Hospital 1st October, 1863. He had been cyanotic all his life, and was liable to attacks of syncope. He died after eight weeks' illness, with double pleuro-pneumonia, pericarditis, and anasarca. A loud systolic murmur was audible over the apex.

Reported by Dr. Murchison in *Path. Soc. Trans.*, vol. xv, p. 83.

ADHERENT PERICARDIUM.

962. A Heart, with its cavities laid open, with the commencement of the great vessels and the bifurcation of the trachea. The opposed surfaces of the pericardium are everywhere firmly united by organised adhesions. The mitral orifice is constricted to a narrow chink by contraction and calcification of the valve. The left auricle, which contains a ridged firm coagulum, is much dilated.

963. The Heart of a pig, laid open. The surfaces of the pericardium, which were firmly adherent, have been separated, and the parietal layer reflected. The greater part of the lymph effused has remained attached to the visceral layer.

From Dr. Langstaffe's Collection.

Presented by Mitchell Henry, Esq.

TUMOURS AND ALLIED GROWTHS INVOLVING THE PERICARDIUM.

CALCAREOUS AND BONY FORMATIONS.

964. A large piece of the Bag of the Pericardium, with a small portion of the Heart adherent to it. The pericardium is much thickened, and presents large plates of a bone-like consistence in part exposed on the surface, but mostly covered on each side by a fibrous membrane. On microscopical examination they were found not to consist of true bone tissue, but to be composed of masses of calcareous globules fused together. The heart weighed sixteen ounces, and was adherent in front to the pericardium. With the exception of slight calcareous deposit, the valves were normal.

From a Greenwich pensioner, who died of cerebral hæmorrhage 25th October, 1855, aged 91. Reported in *Path. Soc. Trans.*, vol. vii, p. 72, by Dr. Van Der Byl for Dr. Quain.

965.

MORBID GROWTHS.

966.

"WHITE SPOT" ON PERICARDIUM.

967. A Heart, showing an area of fibrous thickening. A "white spot" on the anterior surface of the right ventricle.

Vide Nos. 958–960, 977.

DISEASES OF THE SUBSTANCE OF THE HEART.

HYPERTROPHY.

968. A Heart, with its cavities laid open. The left ventricle is enormously hypertrophied and dilated. The aortic valves are much thickened, rigid, and shortened. In the right auricle there is a delicate fibrous band, with a network attached to it, stretching across the cavity; one end is inserted at the tuberculum Loweri, the other at the margin of the Eustachian valve. The heart weighed thirty-six ounces.

From a man, aged 28, who died in the Hospital with dropsy and œdema of the lungs. Five years previously he had rheumatic fever, and had been subject to palpitation ever since.
Reported by Dr. Van Der Byl, in *Path. Soc. Trans.*, vol. ix, p. 173.

969. A Heart, with the apex cut off. The walls of the left ventricle are much hypertrophied and firmly contracted, so that the cavity is almost completely obliterated, presenting the condition formerly known as "concentric hypertrophy."

970. The Apex of the same Heart, showing extreme hypertrophy of the left ventriele.

ATROPHY.

971.

FATTY INFILTRATION.

972.

FATTY DEGENERATION.

973.

RUPTURE OF THE HEART FROM DISEASE.

974. The Apex of a Heart eut off. In the anterior wall of the apex of the left ventriele, near the septum, is a small ragged fissure, round whieh blood is effused beneath the perieardium. The walls of the ventriele are hypertrophied but of fatty appearanee.

From a man, aged 80, an innkeeper, who died suddenly whilst in apparently good health. The pericardium was found filled with coagula.

Presented by J. R. A. Douglas, Esq., 1861.

975. A Heart laid open, with the Areh of the Aorta. There is a rupture of the wall of the ventriele immediately behind the insertion of the left museulus papillaris of the mitral valve. The rupture is two inehes in length, the edges are ragged, and it is larger on the endoeardial than on the perieardial surfaee. A braneh of the eoronary artery with au unruptured strip of perieardium erosses its eentre. The left ventriele is rather dilated. The eommeneement of the aorta is also dilated. The valves are healthy.

976. The Apex of a Heart, showing a rupture of the left ventriele elose to the septum. A glass rod is passed through the rupture.

DILATATION.

977. A Heart, with its eavities laid open. The aortie valves are mueh thiekened and shortened, and the eentral one presents a eonsiderable loss of substanee near its free border. The left ventriele is greatly dilated and hypertrophied, and the top of the museuli papillares have undergone fibrous degeneration. The right ventriele is also hypertrophied. There is an old white pateh on the perieardium at the apex, with fibrous bands adherent to it.

PARTIAL DILATATION OF THE CARDIAC WALL OR ANEURISM OF THE HEART.

978. A Heart, with its eavities laid open. The aortie valves are thickened, and studded with vegetations, and the one eorresponding to the anterior segment of the mitral valve is partially detaehed, and between its base and the mitral valve is seen the orifiee of an aneurismal sae measuring about three-fourths of an ineh in diameter. The sae, whieh is of eonical form, passes upwards between the posterior wall of the aorta and the left auricle, whieh latter is eonsiderably compressed by it; it then eurves somewhat forwards and terminates in a eonieal end; its wall at this part is extremely thin, eonsisting only of the serous perieardium, and is quite transparent. The left ventriele is dilated and hypertrophied.

From a man, aged 38, who died in the Hospital, 10th October, 1871, with the ordinary symptoms of aortic regurgitation. No cause could be assigned for the origin of the disease.

Vide *Path. Soc. Trans.*, vol. xxiii.

979. A Heart, with the left ventricle laid open. The anterior wall of the left ventricle with part of the septum ventriculorum is much thinned, and forms an aneurismal bulging, which is filled with ragged adherent masses of fibrin over a considerable space; the muscular walls are quite deficient, and the ventricle is closed by thickened pericardium. The bifurcation of the aorta, which is suspended in the same bottle, presents large calcareous plates.

980. Part of the left Ventricle of a Heart, presenting a large aneurismal bulging, over which the wall is much thinned, and the muscular coat in great measure deficient and replaced by calcareous plates.

981. A Heart, with its cavities laid open. Leading from the upper part of the left ventricle, behind and below the aortic orifice, is an aneurismal sac of a peculiar winding form; it passes upwards and to the right between the origin of the pulmonary artery and aorta, forming a prominence in the right ventricle, in the site of the pulmonary valves and conus arteriosus. On each side of the pulmonary artery it forms a large globular tumour in the position of the auricles, which are pressed on one side. The larger corresponds to the right auricle. In these situations its walls are calcified and of stony hardness. The opening into the left ventricle is two inches in diameter. It was found nearly filled with firm, adherent, pale stratified fibrin. The aorta and pulmonary artery, especially the latter, are narrowed by the aneurism, and the right coronary artery almost obliterated near its origin. The valves and muscular fibres of the heart are not diseased.

From a woman, who died in the Hospital in 1867, from cancer of the uterus, extending into the bladder. She also suffered from a sense of tightness in the chest, dyspnœa, and occasional palpitation. There was a loud systolic bruit and thrill, most pronounced at the base of the heart, and percussion dulness over the second and third left costal cartilages, extending to the right of the sternum. The sphygmograph showed evidence of prolonged arterial expansion.

Presented by Henry Arnott, Esq.

Vide *Path. Soc. Trans.*, vol. xix, p. 149.

982. The left Ventricle of a Heart, laid open. The apex and posterior wall are much thinned, and form an aneurismal bulging, to the inner wall of which masses of fibrin are adherent.

983. A Heart, with both ventricles laid open. The conus arteriosus is greatly enlarged, its walls thickened abruptly, and its cavity partially blocked by a mass of fleshy fragile vegetations springing from the dense milk-white endocardium and spreading to the attached margin of the pulmonary valves. Half an inch below the attachment of the valves, the septum ventriculorum in its anterior part is the seat of two perforations, which are fringed with vegetations, and which form the summit of a funnel-shaped aneurismal protrusion of the septum on its left wall. The endocardium in the aortic sinus is greatly thickened.

There were also five aneurisms on branches of the pulmonary artery in the right lung, which, in the apex and middle lobe, was the seat of two vomicæ of old date; on the left side patches of embolic pneumonia and a single aneurism; a softening infarct in the spleen; also an aneurism of the left middle cerebral artery.

Vide Series XIV, No. 1122, where clinical details of the case will be found.

FIBRINOUS MASSES AND BLOOD CLOTS IN CAVITIES.

984. A left Auricle and Ventricle. The mitral valve is much thickened and the orifice constricted. It was found to be obstructed by a fibrinous cyst, the size of a pigeon's egg. This is seen suspended by threads above the auricle. In the auricular appendix, entangled among the columnæ carneæ, are some smaller bodies of similar nature, they consist of fibrinous coagula in which the central parts have softened down.

From a woman, aged 25, who died in the Hospital, 4th November, 1857. She had never had rheumatic fever, but had suffered from symptoms of heart disease for twelve months. Her death was sudden, and no doubt caused by the detachment of the cyst from the auricular appendix, and its impaction in the mitral orifice.

Reported by Dr. Van Der Byl, in the *Path. Soc. Trans.*, vol. ix, p. 89.

985. A Heart, with the left Ventricle laid open. The ventricle is much dilated, and its walls hypertrophied. At the apex there is a globular mass, the size of a racquet ball; this has been injected. Behind the anterior papillary muscle there is a similar but much smaller mass; other thrombi are visible projecting through the meshes of the columnæ carneæ. In the recent condition these masses were quite smooth, and filled with a brown grumous fluid composed of softened blood clot.

From a man, who died from chronic nephritis; there was no alteration in the valves of the heart.

985A. A Heart. The left auricle and appendix are almost completely filled with laminated fibrinous clot, through which narrow sinuous channels pass from the pulmonary veins to the mitral orifice. The latter is extremely contracted, and button-hole in shape. Its flaps are much thickened, and quite rigid. The aortic cusps are welded together, and the orifice stenosed. The left ventricle is hypertrophied.

986.

MYO-CARDITIS.

987.

FIBROUS DEGENERATION OF THE HEART.

988.

GUMMATA IN THE HEART.

989.

TUBERCLE.

990.

TUMOURS AND ALLIED MORBID GROWTHS IN THE HEART.

BONY FORMATIONS.

991.

FIBROUS TUMOURS.

992.

SARCOMA.

993.

MELANOTIC TUMOURS.

994. A Heart, showing a number of black nodules, varying in size from a chestnut to a pea, situated in the tissue of the muscular walls, and in some instances projecting into the cavities. On microscopical examination the growth presented the characters of a melanotic spindle-celled sarcoma.

Vide *Path. Soc. Trans.*, vol. xxiii, p. 251.

From a woman, aged 63, who died seven months after the removal of a melanotic tumour from the left orbit.

CANCERS.

995.

ENTOZOA.

996. A Heart, with its cavities laid open. Projecting from its posterior surface near the base, at the junction of the auricular septum with the septum of the ventricles, is a tumour of the size of a small apple, formed by a hydatid cyst, the wall of which at its most prominent point is extremely thin; this cyst has been laid open, and lying inside it is seen a crumpled gelatinous echinococcus vesicle. The tumour causes considerable bulging into the cavity of both auricles, alters the shape of the auriculo-ventricular orifices, and completely obliterates the coronary sinus. The blood found its way into the auricle from the heart by means of enlarged veins of Thebesius. The heart is considerably enlarged, and the pericardium was adherent.

From a man, aged 19, who died in Guy's Hospital with the ordinary symptoms of cardiac dropsy depending on mitral imperfection.

Path. Soc. Trans., vol. xxi, p. 99.

Presented by Dr. Moxon.

ENDOCARDITIS.

997. A portion of a left Auricle and the Mitral Valve. The endocardium of the auricle and the auricular surface of the valve is covered with large ragged vegetations.

From a woman, aged 23, who died 24th November, 1860. She had previously suffered from acute rheumatism. On 24th November she was suddenly seized with left hemiplegia and coma. The right middle cerebral artery where it breaks up into its principal branches was plugged by a firm adherent mass of fibrin, which extended along the branches. There was extensive softening of the right corpus stratum, optic thalmus, and middle cerebral lobe. There was also an infarction in the spleen.

P.M. Reg., vol. iv, No. 1066.

998.

PAPILLARY VEGETATIONS AND DEPOSITS OF FIBRIN ON THE VALVES.

999. The Aortic Valves with part of the Aorta, showing large papillary vegetations projecting from the cusps, which are also ulcerated, and in part calcified.

From a man, aged 52, who had suffered from cardiac symptoms for some years previous to his death, which took place from syncope, on 3rd May, 1876. The mitral valve was extensively ulcerated.

1000. Part of the left Ventricle with the commencement of the Aorta. Only two semilunar valves are present; attached to the surface of one there are large ragged warty vegetations, surrounding a perforation in the valve; only one coronary orifice is visible.

Vide *Diseases of Particular Valves.*

ULCERATION OF THE VALVES AND ENDOCARDIUM.

1001. A Heart, with the left auricle and ventricle laid open. The mitral valve is thickened, and its free border and auricular surface studded with vegetations, which also extend over the adjacent auricular wall. One of the chordæ tendinæ is much thickened, and has a large warty vegetation adherent to it. There is no hypertrophy of the wall of the ventricle.

1002. A Heart, with the left auricle and ventricle laid open. Almost all the chordæ tendinæ belonging to the posterior segment of the mitral valve are ruptured, and this segment, which is much thickened, and has numerous vegetations attached to its free border, projects forward across the current of blood, and its upper or anterior surface is much bulged. The ruptured chordæ tendinæ are much thickened and softened, and appear to be coated with lymph, some of the adjacent untorn ones are in a similar condition. The anterior flap

of the valve is thickened, and its auricular surface studded with vegetations. The left ventricle is much dilated and somewhat hypertrophied.

From a man, aged 50, who died in the Hospital, February 9th, 1851. He had suffered from palpitation for two months, but had been subject to winter cough for many years. Ten years previously he had had rheumatic fever. While in the Hospital he presented the usual symptoms of mitral regurgitation, with anasarca and pneumonia, and three days before death had an epileptic fit.

Reported in *Med. Times* for 12th April, 1851, by W. Sibley, Esq.

1003. The commencement of an Aorta. The semilunar valves are thickened and shortened, and the right one presents a large ragged perforation occupying nearly half the valve. The aorta presents patches of atheroma and an aneurismal bulging at the origin of the right coronary artery.

From a man, aged 19, who died suddenly while suffering from cardiac dropsy and jaundice.

1004. The commencement of an Aorta. Only two semilunar valves are present; they are much thickened, ulcerated, and studded with vegetations; the orifices of the coronary arteries are in their normal position.

Vide Nos. 954, 1020.

THICKENING, CONTRACTION, AND ADHESION.

1005. A transverse section of a Heart, showing its orifices. The tricuspid valve is much thickened, its segments cohere, and its orifice narrowed. There is a similar condition of the mitral valve, with the addition of numerous warty vegetations on its auricular aspect. The orifice will not admit the tip of the little finger. The segments of the aortic valve are also thickened, coherent, and studded with vegetations, leaving a small triangular orifice. The heart weighed nineteen ounces; the right ventricle was greatly dilated.

From a woman, aged 37, who died in the Hospital, 3rd June, 1869.
P. M. Reg., No. 902.

1006. A Heart, laid open to show the tricuspid, mitral, and aortic valves from above. The right auricle is much dilated and hypertrophied. The tricuspid orifice is funnel-shaped, the valves thickened and coherent, and bounded below by a ring of fibrous tissue. The orifice admits two fingers, the chordæ tendinæ are also much thickened. The cavity of the right ventricle is large and overlaid with fat. The left auricle is greatly enlarged and the appendix completely filled by adherent coagulum, presenting a rounded surface to the cavity. The mitral orifice is reduced to a semilunar slit at the bottom of a funnel-shaped diaphragm formed by the fusion of the thickened cusps. Minute beaded vegetations fringe this orifice. The aortic valves are greatly thickened throughout, especially at the corpora Arantii; they are almost in a position of closure, the margins of the cusps being maintained in a vertical position and removed from the aortic wall. Minute bead-like vegetations fringe the upper margin of each cusp.

See *P. M. Reg.*, 1878, No. 165.

1007. The right Auricle and Ventricle, laid open. Part of the edge of the posterior flap of the tricuspid valve has become adherent to the lining membrane of the ventricle, which is thickened and opaque. The edges of the valve are thickened, and the chordæ tendinæ shortened and also thickened. The heart weighed fourteen ounces.

From a woman, aged 61, who died in the Hospital, 17th August, 1853, after nine weeks' illness, with dropsy, hydrothorax, and pneumonia. An inconstant systolic bruit was audible at the apex. She had never suffered from rheumatism or cough.

DEPOSITS OF CALCAREOUS MATTER.

1008. The commencement of the Aorta and Coronary Arteries, with the Mitral Valve, dried and varnished. Calcareous deposits are seen projecting into the aorta. The coronary arteries are extensively calcified, and calcareous patches are visible on the valves.

1009.

DISEASES OF PARTICULAR VALVES.

TRICUSPID VALVE.

1010. A Heart, showing the interior of the ventricle, and the mitral, aortic, and tricuspid valves. The heart is above the normal size, but not greatly enlarged (weight eleven ounces). Springing from the margin of the tricuspid valve, and projecting into the auricle, are numerous warty vegetations. The chordæ tendinæ are beaded with vegetations continuous with those on the valve cusps. The pulmonary valve is normal. The left auricular appendix is blocked by a thrombus. There is a firmly adherent mass of vegetations, the size of a French bean, attached to the posterior wall of the auricle about half-inch above the mitral valve. The auricular margin of the mitral valve is covered with large warty masses of vegetations, and the chordæ tendinæ are fringed with vegetations. There are vegetations on all the cusps of the aortic valves.

From a woman, aged 49, who died in the Hospital, under the care of Dr. Cayley, 12th January, 1879. In addition to the foregoing lesions the kidneys were granular, the liver "nutmeg," and the lungs emphysematous.
See *P. M. Reg.*, No. 12., 1879.
See also No. 1006.

1011. A Heart, with the apex and a portion of the base removed, showing the upper surfaces of the tricuspid and mitral valves. The heart is very large, especially the right auricle and left ventricle; the walls of the latter are much hypertrophied. The tricuspid orifice, funnel-shaped from cohesion of its cusps, which are thickened and roughened, is in the form of a narrow slit one inch in length, admitting the tips of two fingers. The mitral orifice is also funnel-shaped, and only half the size of the tricuspid; it admits the tip of the fore-finger. There are no vegetations on either valve.

From a woman, aged 48, who died in the Hospital, 28th August, 1877. The kidneys were granular and contracted.
See *P. M. Reg.*, 1877, No. 153.

1012. A Heart, with its cavities laid open. The edges of the tricuspid valve are thickened, and its chordæ tendinæ shortened. A delicate fibrous band two inches in length, much resembling one of the chordæ tendinæ, passes from the wall of the right auricle near its top, and is attached to the free edge of the posterior segment of the tricuspid valve; attached to this band is a network of delicate fibrillæ. The aortic valves are much thickened. The left ventricle is hypertrophied and much dilated. Old pericardial adhesions are visible on the right ventricle.

From a boy, aged 16, who is stated to have had a tricuspid murmur.

PULMONARY VALVE.

1013. The commencement of the Pulmonary Artery and Aorta. The pulmonary valves are much thickened, and covered with vegetations. On one of the segments these form long filamentous processes. The aortic valves are also much thickened and covered with vegetations. The ascending part of the arch of the aorta is very atheromatous.

1014.

MITRAL VALVE.

1015. The Ventricles of a Heart, laid open. The aortic and mitral valves are greatly thickened and partially calcified, and the mitral orifice is much constricted. The margins of the tricuspid valves are also thickened.

1016. Part of a left Auricle and Ventricle. The mitral valve is thickened, and the free border of its anterior segment studded with warty vegetations. The posterior wall of the auricle is covered with similar vegetations.

1017. The Mitral and Aortic Valves, with part of the left Ventricle. On the auricular aspect of the anterior segment of the mitral valve is a ragged ulcerated mass of soft vegetations the size of a filbert.

From a boy, aged 19, who died in the Hospital 10th October, 1858, after four weeks' illness with acute rheumatism (second attack), pericarditis, and renal disease. The heart weighed eleven ounces.
P.M. Reg., 871.

1018. The Mitral Valve, with its Musculi Papillares. The valve is thickened, and its segments coherent, so as to leave a circular orifice not admitting the tip of the little finger. The tricuspid orifice is also constricted to nearly the same dimensions. The heart weighed fourteen ounces. There were numerous patches of pulmonary apoplexy.

From a woman, aged who died in the Hospital, 19th February, 1860.
P. M. Reg., vol. iv, No. 1071.

1019. Part of a left Ventricle. Attached to the anterior segment of the mitral valve is a mass of rough vegetations. The wall of the auricle also presents numerous vegetations. The spleen, which is suspended in the same bottle, contains several fibrinous deposits situated beneath the capsule, the largest the size of a filbert. Some of these have softened down so as to form cavities.

AORTIC VALVE.

1020. The first part of an Aorta, showing only two semilunar valves, both of which are thickened and studded with vegetations; and the right one, much ulcerated and bulging downwards, also presents a partial septum. Two coronary orifices are visible, but both are situated on the right side, corresponding to the two imperfect segments of the right valve.

1021. A portion of a left Ventricle, with the commencement of the Aorta. The right and left coronary cusps are ulcerated, torn from their attachment, and turned towards the ventricle. The left coronary and anterior cusp have coalesced at their joint attachment. There is not much thickening of the valves.

1022. The left Ventricle of a Heart and commencement of the Aorta. On the left and middle segment of the aortic valves are large granular warty vegetations; the ventricle is dilated.

From a woman, aged 37, suffering from cancer of the uterus, who died in the Hospital 24th November, 1856. She was suddenly seized with right hemiplegia, accompanied by severe pain in the left temporal region. On post mortem examination the anterior and middle cerebral arteries were found obstructed by triangular fibrinous plugs.
Reported by Dr. Van Der Byl, in *Path. Soc. Trans.*, vol. vii, p. 118.

1023. The commencement of an Aorta. The semilunar valves present large fibrinous vegetations attached principally to the situation of the corpora Arantii.

1024. Two specimens, the upper one consisting of the Mitral Valve and its attachments, the lower one of the aortic valves. They are all much thickened, and the orifices are contracted.

From a man who suffered from angina pectoris, and who died with dropsy.

Presented by J. G. Forbes, Esq.

1025. The Aortic Valves. All the segments are much thickened, and two of them have coalesced. On their aortic surfaces are visible large calcified atheromatous deposits, and the common attachment to the aorta of the coalesced ones is enormously thickened and calcified.

1026. The commencement of an Aorta. The semilunar valves have coalesced into a hard nodulated calcified mass, leaving an orifice an inch in circumference. The heart was much hypertrophied, and its cavities dilated; it weighed eighteen ounces.

From a man, aged 27, who died in the Hospital 22nd January, 1861, with dropsy, pulmonary apoplexy, and amyloid kidneys. He had not had rheumatic fever.

P. M. Reg., vol. iv, No. 1193.

1027. The origin of the Aorta, showing both upper and lower aspects of the valves. The cusps are much thickened, and have coalesced, and the edges are covered with fibrinous vegetations. These changes have produced extreme stenosis of the orifice.

1028. The commencement of an Aorta. The semilunar valves are much thickened, and the adjacent halves of the right and left ones have been completely destroyed by ulceration; fibrinous vegetations are attached to the edges left by the ulceration, and also to the aorta above the left coronary orifice.

1029. A Heart, with its cavities laid open. The aortic valves are much thickened, and have large fibrinous vegetations attached to their free borders, one of which attached to the central valve is the size of a horse bean; similar smaller vegetations are attached to the mitral valve. The left coronary artery arises opposite to the central instead of the left segment of the valve, and at its origin the aorta forms a slight bulging. The left ventricle is greatly dilated and also hypertrophied. There are numerous white patches on the surface of the heart. It weighed thirty ounces.

From a man, aged 33, who died in the Hospital 19th October, 1855.

1030. The upper part of the Ventricles of a Heart, with the commencement of the Aorta. The aortic valves are very greatly thickened, ulcerated, and covered with tuberculated vegetations. Below and to the left of the orifice of the right coronary artery, corresponding to the insertion of the contiguous margins of the right and middle semilunar valves into the aorta, and to the interval between them, where these attachments have been broken down by ulceration, is a circular orifice with rounded margins four-tenths of an inch in diameter. This leads into an aneurismal sac which passes in a winding course behind the conus arteriosus of the right ventricle, forming a considerable bulging into it; it then projects into the pericardium nearly in the situation of the right auricular appendix, and comes into contact with the aorta about an inch above its orifice of exit. At the point of contact the coats of the aorta are in a state of atheroma, and the corresponding inner surface is cracked, roughened, and covered with warty masses of fibrin, so that in all probability a second opening between the aneurismal sac and the aorta was imminent.

The patient was a boy, aged 15 years, who died in the Hospital 23rd October, 1853. On 13th October he was brought to the Hospital in a state of profound coma, with left hemiplegia. His friends believed he had fallen from a scaffold, his occupation being that of a plasterer's boy. On post-mortem examination no injury to the skull was found, but there was a large recent apoplectic clot in the right cerebral hemisphere. The heart was much hypertrophied, weighing fifteen and three-quarter ounces, and the pericardium was universally adherent, and there were old infarctions in the kidneys.

Surg. Reg., vol. i, No. 273.

VALVULAR ANEURISM.

1031. The Mitral and Aortic Valves. Projecting from the middle of the anterior segment of the mitral valve is a tumour the size of a pea, with its base surrounded by a fibrinous ring; it is formed by an aneurismal protrusion of the lining membrane of the posterior surface of the valve through a hole in the fibrous structure of the valve. The aortic valves are studded with vegetations, and ulcerated.

From a woman, aged 40, who died in the Hospital in 1866 of cardiac dropsy. She had had repeated attacks of rheumatic fever, and presented the signs of both mitral and aortic regurgitation.

Reported by Dr. Cayley, in *Path. Soc. Trans.*, vol. xvii, p. 86.

1032. A similar Specimen, showing vegetations on the aortic valve and aneurism of the mitral valve.

1033.

1034.

SERIES XIV.

INJURIES AND DISEASES OF ARTERIES.

INJURIES.

WOUNDS OF ARTERIES.

1035. The lower part of an Abdominal Aorta and the Iliac Arteries. Two-thirds of an inch above the origin of the inferior mesenteric artery there is a ragged transverse wound in the aorta, bifurcating at one end. It occupies nearly one-half the circumference of the vessel, two-thirds of its length being on the posterior wall and one-third on the left side.

From a man, aged 22, who shot himself through the belly with a duelling pistol 24th March, 1859. The bullet entered two inches to the left and half an inch above the umbilicus, passed through the centre of the stomach two and a quarter inches above the great curvature; wounded the jejunum, and lodged in the body of the fourth lumbar vertebra. The patient survived one and a quarter hours. There was great extravasation both behind and into the peritoneum.

Reported by A. Shaw, Esq., in *Path. Soc. Trans.*, vol. x, p. 168.

RUPTURE OF ARTERIES.

FROM EXTERNAL VIOLENCE.

1036. A portion of the lower end of the Abdominal Aorta laid open. The inner, and of part of the middle coat are ruptured transversely, with an uneven edge round the whole circumference of the vessel. A portion of these coats, measuring about an inch in length, has been, as it were, dissected off and turned down into the vessel beneath, preserving its continuity as a tube, and at the same time becoming inverted, so that a tube nearly an inch in length, the exterior of which is formed by the inner coat, and the interior by the layers of the middle coat, hangs down in the aorta.

The patient, a costermonger, aged 45, was squeezed against a wall by the handle of a truck, which pressed against the right side of the belly. There was a lacerated wound of the integument above Poupart's ligament on the right side. The psoas muscle was ruptured, and the transverse process of two of the lumbar vertebræ fractured, and there was a longitudinal rent in the anterior wall of the vena cava. The patient survived four hours. He died 28th August, 1855.

Reported by A. Shaw, Esq., in *Path. Soc. Trans.*, vol. vii, p. 131.

1037. Part of a Popliteal Artery, laid open. The internal coats of the artery, round its whole circumference have been torn through, separated for three-quarters of an inch from the outer coats and turned down into the lower part of the vessel, causing its complete obstruction.

From a man, who met with a fracture of the right femur in the lower third from the wheel of an omnibus passing over his leg.

Narrated by C. H. Moore, Esq., in *Holmes's System of Surgery*, vol. i, p. 736, 2nd Ed.

FROM THE EFFECTS OF CONTIGUOUS INFLAMMATION.

1038. Part of a superficial Femoral Artery. About its centre the inner and part of the middle coats are ruptured transversely. A ligature which was put on after amputation is seen round the lower end of the artery.

From a man, aged 39, who met with a fracture of the thigh by being knocked off a ladder by a fall of bricks. The posterior tibial artery was torn across a little above the ankle; there was pulsation of the popliteal artery. The lower half of the leg and foot became gangrenous, and amputation was performed at the knee joint eleven weeks after the accident. The patient survived the operation seven days, and died 25th March, 1858.

Reported in *Path. Soc. Trans.*, vol. xix, p. 347.

Presented by Henry Arnott, Esq.

1039.

EFFECTS OF THE APPLICATION OF LIGATURES TO ARTERIES.

DIVISION OF THE INNER COATS.

1040.

FORMATION AND ADHESION OF COAGULUM.

1041.

Vide Specimen No. 1042.

CLOSURE OF THE END OF THE ARTERY.

1042. Femoral Artery and Vein. A ligature is placed round the lower end of the artery, and for a distance of about two inches the vessel is occupied by coagulum. The whole of the vein is plugged by adherent coagula.

From a man, whose thigh was amputated after partial resection of the knee joint for necrosis of the head of the tibia.

UNION OF DIVIDED ENDS OF ARTERIES LIGATURED IN CONTINUITY.

1043.

OBLITERATION OF A PORTION OF AN ARTERY AFTER LIGATURE IN CONTINUITY.

1044. A Tongue, Larynx, and Pharynx, with the arterial vessels injected. The anterior third of the tongue has been destroyed by epithelioma, which has also infiltrated a part of the lower jaw. The facial and lingual arteries of both sides were ligatured at the same operation, in consequence of violent hæmorrhage from the tongue. The four arteries are converted into fibrous cords from the seat of ligature as far onwards as the next collateral branch.

After the operation the discharge from the mouth lost its fœtor. The hæmorrhage did not recur, and the patient lived in comfort for three months.

Presented by Henry Morris, Esq.

FORMATION OF COLLATERAL CIRCULATION.

1045.

FAILURE OF NORMAL PROCESS OF CLOSURE OF ARTERIES FROM DISEASE.

1046.

RE-LIGATION OF ARTERIES FOR SECONDARY HÆMORRHAGE AFTER LIGATURE IN CONTINUITY.

1047.

LIGATURE OF PARTICULAR ARTERIES IN CONTINUITY.

1048. Parts, after ligature, of the left common Carotid for symptoms of intra-cranial aneurism, caused by thrombosis of the cavernous sinus. The preparation consists of the great vessels of the left side of the neck and the base of the middle fossa of the skull. The common carotid has been ligatured a little below its bifurcation; there is now a gap nearly an inch in length between the two ends of the vessel. The hypoglossal nerve is seen crossing the internal carotid artery. The upper part of the internal jugular vein, the cavernous sinus and inferior petrosal sinus, and the termination of the ophthalmic vein are obstructed by firm adherent tawny masses of fibrine.

The patient was a man, who presented all the signs of intra-cranial aneurism. There was pulsating proptosis of the left eye-ball, and a loud aneurismal bruit was heard on placing the stethoscope over the left temporal region; this was audible to himself. Mr. William Bowman, F.R.S., placed a ligature round the common carotid artery in King's College Hospital. The patient died some weeks after the operation, having had repeated attacks of secondary hæmorrhage. The only morbid conditions discovered was the thrombosis described above, and great dilatation of the orbital veins.

Presented by J. W. Hulke, Esq., F.R.S.

CHANGES IN LIGATURES APPLIED TO ARTERIES.

1049.

DISEASES OF ARTERIES.

INFLAMMATION.

PERIATERITIS.

1050.

ACUTE ARTERITIS.

1051. The Aortic Arch with the Valves. There are numerous recently raised gelatinous patches scattered throughout the aorta, some with a roughened surface. Attached to the wall of the vessel, just below the origin of the innominate artery, there is a oval shaped mass of fibrine as large as a walnut, which is prolonged downwards as a rounded cord toward the aortic valves, just above which it terminates in a free end.

From a man, aged 40. There were numerous emboli in the spleen and kidneys. The cardiac valves were not diseased.

ENDARTERITIS DEFORMANS (ATHEROMA).

DEPOSIT OF GELATINOUS MATTER BENEATH THE INNER COAT.

1052. 1053.

1054.

Vide Specimen No. 1116.

FATTY DEGENERATION OF THE GELATINOUS DEPOSIT.

1055. A portion of an Aorta, showing extensive atheromatous degeneration. The atheromatous patches have undergone fatty degeneration.

1056.

DEPOSIT OF CALCAREOUS MATTER.

1057. The lower part and bifurcation of an Abdominal Aorta. Its walls are studded with large rough calcareous plates, which are exposed on the surface.

1058. A piece of the Aorta, dried and varnished. The inner wall is thickly studded with calcareous plates uncovered by the lining membrane.

1059. A piece of the Aorta, dried and varnished, presenting similar characters to the last specimen.

Vide Specimens Nos. 1069, 1099.

EXFOLIATION OF THE INNER COAT AND ITS RESULTS.

1060. The common and external Iliac Artery of the left side laid open. About two inches below the origin of the external iliac artery is a minute circular aperture in the vessel a quarter of an inch in diameter. The tunica adventitia of the artery presents a much larger opening of an oval form. The opening is completely closed by a plug of fibrine and on looking at the inner surface of the artery a cylinder of fibrine an inch in length, about one-third of the calibre of the vessel, is seen adherent to the inner coat at the site of the perforation.

From a woman, aged 60, who died 5th November, 1856, from cancerous ulceration of the left groin.

1061.

1062.

DEPOSIT OF FIBRINE UPON ATHEROMATOUS PATCHES.

1063.

Vide Specimens Nos. 1051, 1060.

1064.

PRIMARY CALCAREOUS DEGENERATION.

1065. A portion of a Femoral Artery converted into a rigid tube by calcareous degeneration of its coats.

From a case of senile gangrene.

1066.

ULCERATION EXTENDING INTO ARTERIES FROM ABSCESSES.

1067.

GENERAL DILATATION OF ARTERIES.

1068.

ANEURISM.

VARIETIES OF ANEURISM.

FUSIFORM ANEURISM.

1069. A Thoracic Aorta, dried and varnished. The ascending part of the arch presents an uniform fusiform aneurismal dilatation, giving to the whole vessel the shape of a glass retort. The dilated part and the lower end of the vessel are extensively calcified.

1070.

SACCULATED ANEURISM.

1071. The arch of an Aorta and its branches, with the large veins. Springing from the arch of the aorta and involving the innominate artery is a sacculated aneurism the size of a fœtal head. The left innominate vein runs in its upper wall, and is flattened by it; the right one is adherent to the sac and compressed by it.

From a man, aged 33, who died in the Hospital 10th July, 1838. He had great œdema and lividity of the neck and upper extremities, with venous distension and great enlargement of the anastomosing veins between the systems of the superior and inferior cavæ. The swelling of the head and neck, which was the first sign noticed, appeared in February, 1838. He died with pericarditis. The lymphatic glands of the neck and chest were enlarged and engorged with serum.

Related by Sir Thomas Watson in his lectures on the *Principles and Practice of Medicine*, vol. ii, p. 348, 4th Ed.

1072. An Abdominal Aorta, which at its bifurcation is dilated into a sacculated aneurism the size of a cocoa-nut. The vena cava is seen running along the wall of the sac, and is much compressed.

For other specimens of sacculated aneurism, vide *Aneurisms of Particular Arteries.*

CONSECUTIVE ANEURISM.

1073.

DISSECTING ANEURISM.

1074. The arch of an Aorta, laid open. Numerous atheromatous deposits are visible on its inner surface, and the whole vessel is dilated. About an inch above the semilunar valves is an irregularly transverse rent in the inner coat extending nearly round the whole circumference of the vessel, leaving only about half untorn on the concave aspect of the vessel. This rent leads into a pouch formed by the separation of the inner and middle coats, which extends as far as the origin of the innominate. The separation of the coats without forming a pouch is continued on into the descending part of the arch, and also the great vessels arising from the arch.

1075.

VARICOSE ANEURISM.

1076. A Popliteal Artery, Vein, and Nerve. In the course of the popliteal nerve is a cyst with sacculated walls, the size of a small orange. As the nerve approaches the cyst it spreads out into a hollow cone, forming its upper wall. The separated nerve fibres pass partly into the wall of the cyst and partly traverse its cavity, and below they again unite and the nerve resumes its normal appearance. The cyst itself is composed of an external fibrous investment, continuous with the nerve sheath, and of a delicate lining membrane. Two vessels open into the cyst, a vein of the calibre of the basilar artery, which passes down into it from a sural vein, and opens by an oblique valvular aperture, and a small artery which is seen winding over its surface and communicating with it by a circular orifice.

From a woman, aged 32, who underwent amputation of the left thigh, 2nd March, 1864. On 22nd May, 1862, she received a blow in the left ham from a rotating pump handle. Fourteen days afterwards a movable swelling the size of a nut appeared, which at the end of November attained its present size. It was twice punctured, and gave exit to venous blood. It did not pulsate. It was the seat of a stabbing pricking pain, which passed to the sole of the foot. Before amputation the tumour was laid open, and was found filled with venous blood and loose clots in the sacculated recesses in the wall. The patient recovered.

Reported in *Med. Chir. Trans.*, vol. xlix.

Presented by C. H. Moore, Esq.

ANEURISMAL VARIX.

1077.

ANEURISM OF PARTICULAR ARTERIES.

ANEURISM OF THE ARCH OF THE AORTA.

1078. A Heart and the arch of the Aorta. Springing from the anterior wall of the ascending aorta, midway between the semilunar valves and the origin of the innominate, is an oval aneurismal sac, the size of a plover's egg. The reflexion of the pericardium takes place along its centre. Immediately within the pericardium is a small round orifice of rupture, with a glass rod passed through it. Death was sudden.

1079. A Heart, with the arch of the Aorta and bifurcation of the Trachea. Projecting from the under surface of the arch of the aorta, a little beyond the origin of the left subclavian, is an aneurismal sac, the size of a large walnut. It presses on the left bronchus, and opens into it by a ragged orifice partly obstructed by masses of fibrine.

1080. A Heart, with the arch of the Aorta. Lying across the base of the heart, immediately in front of the origin of the great arteries, is a somewhat oval aneurismal sac, the size of a small hen's egg. It springs from the anterior wall of the aorta immediately above the semilunar valves. The parietal pericardium is firmly adherent to it by old adhesions. It was partially filled with laminated fibrine and black coagula. In the position of the right auricle is another aneurismal cavity, more than twice the size of the first; it is formed between the visceral pericardium and the heart; it contained about four ounces of loose black coagulum, and was also lined by a thin layer of laminated fibrine. Between this sac and the aortic aneurism there is a small communication marked by a slight effusion of blood beneath the pericardium. The right auricle and ventricle are greatly compressed, scarcely admitting the passage of a finger from the ventricle through the tricuspid orifice into the superior cava. The parietal pericardium was everywhere united to the heart by loose adhesions.

The patient was a tailor, aged 30, who died in the Hospital 26th April, 1869. He had suffered from no particular symptoms of heart disease till the day of his death, when he fainted in the street, and was brought to the Hospital. His extremities were cold, his features pinched, and his voice only a whisper; but he was quite conscious. A systolic apex and a double basic murmur were audible over the heart, the impulse of which was increased. His pulse was of fair strength and volume. He died suddenly an hour after admission.

Reported by Dr. Murray in *Path. Soc. Trans.*, vol. xx, p. 131.

1081. The arch of an Aorta, with the bifurcation of the Trachea and the Œsophagus. The transverse part of the arch is dilated into a large aneurismal sac, which is adherent to the trachea just above its bifurcation. There is a communication between the left bronchus and the œsophagus which would admit the tip of the little finger. This was probably due to absorption caused by the aneurism pressing the bronchus backwards against the œsophagus.

1082. The commencement of the Aorta and Pulmonary Artery. The aorta immediately above the semilunar valves, which though slightly thickened are competent, is dilated into a fusiform aneurism, three and a half inches in its long diameter, and ceasing somewhat abruptly just below the origin of the innominate. The walls of the aneurism are very atheromatous and much attenuated in front. In its anterior wall, one and three-quarter inches above the valves, is a circular opening four inches in diameter leading into the pulmonary artery; its edges, on the pulmonary aspect, are smooth, on the aortic, surrounded by a fringe of minute vegetations. The pulmonary orifice is dilated, measuring three inches and ten lines in circumference. In a branch of the pulmonary artery is a soft fibrinous-looking growth, the size of a small bean, attached by a firm pedicle to the wall of the artery. (This is suspended in the same bottle.)

From a man, aged 48, who died in the Hospital, 23rd April, 1867. He had always had good health till September, 1867, when he fell off a plank into a sawpit. This was followed by palpitation and shortness of breath, and at Christmas he became dropsical. He was admitted 19th March; he had anasarca and ascites, cold feet, and was remarkably anæmic, and had signs of congestion of the lungs. There was a loud systolic murmur at the apex, very loud also at the base and mid-sternum. He died somewhat suddenly by syncope.

Reported by Dr. Murchison in *Path. Soc. Trans.*, vol. xix, p. 190.

1083. The commencement of the Aorta and Pulmonary Artery, with the semilunar valves. Immediately above the orifice of the right coronary artery an aneurism of the size of a walnut springs from the aorta and communicates by an irregular opening half an inch in diameter with the pulmonary artery an inch from the semilunar valves. The aorta is very atheromatous; its semilunar valves though thickened were quite competent.

From a man, probably aged about 50, who died in the Hospital, 28th September, 1869. He had granular disease of the kidneys, dropsy, hydrothorax, pericarditis, and peritonitis. The pulse had a well marked collapsing character.

Vide *Path. Soc. Trans.*, vol. xxi, p. 122.

1084. The arch of an Aorta and its branches, with the Trachea and Œsophagus. The upper and front walls of the transverse part of the aorta are dilated into two large pouches, one of which extends upwards into the neck in front and to the left of the trachea, reaching as high as the cricoid cartilage. The left subclavian takes its origin from this sac and is plugged by masses of fibrine, and at the lowest part of the sac there is a ragged opening into the œsophagus, an inch in diameter, partly obstructed by masses of fibrine. The other pouch passes downwards and to the left into the cavity of the chest, and is filled by concentric laminæ of fibrine.

1085. Part of the arch of the Aorta, with the Sternum, and left Costal Cartilages, dried and varnished. Between the arch and the first three left costal cartilages is an aneurismal sac, the size of an orange, communicating with the ascending aorta by an orifice three-fourths of an inch in diameter. The second costal cartilage is partly absorbed, leaving a large opening in the anterior thoracic wall, through which the internal aneurism communicated with a large false aneurismal sac situated on the front of the chest, on the left side. Into this external sac, the bursting of which was imminent, Mr. Moore introduced, during life, twenty-six yards of fine iron wire, and so caused coagulation of the contents. (See next preparation.)

The patient, a man, aged 27, survived five days and died with pericarditis and pyæmic deposits in the kidneys, 12th January, 1864. The aneurism had been noticed fourteen months.

Reported by Dr. Murchison and C. H. Moore, Esq., in *Med. Chir. Trans.*, vol. xlvii, p. 136.

1085A. A mass of dark Coagulum, enveloping and embedded in a coil of fine iron wire twenty-six yards in length, which had been introduced into the external aneurismal sac of the preceding case.

1086. The arch of an Aorta, the lower end of the Trachea, and the Œsophagus. Springing from the convexity of the arch is a large sacculated aneurism the size of two fists, nearly filled by a mass of tawny concentrically laminated fibrine. It presses against the trachea, and forms a bulging separating the trachea and the œsophagus. Another bulging is seen between the left carotid and subclavian arteries; this is grooved by the left pneumogastric nerve, which is here seen to be flattened. The innominate and left carotid arteries, which appear to arise from a common trunk, have also deeply grooved the tumour.

The patient was a cavalry soldier, and is stated to have died from the interference with the respiratory functions produced by the pressure on the vagus and recurrent laryngeal nerves.

Presented by J. R. A. Douglas, Esq.

1087. The arch of an Aorta and its branches, with a portion of the left Lung and Heart. Springing from the summit of the arch is a sacculated aneurism, ovoid in shape, measuring eleven inches from right to left, and ten inches from front to back, almost completely filled by laminated decolorised fibrine. It projects forwards to the sternum, and laterally into both pleural cavities, especially the left. The innominate artery is not involved, but the left carotid artery is buried in the wall of the sac and occluded, the left subclavian being also involved and nearly obliterated; bristles have been passed through these vessels. The ascending aorta is atheromatous and dilated. The heart was not enlarged.

From a woman, aged 45, admitted into Murray Ward on 22nd November, 1875, suffering from apnœa and signs of effusion in left pleural cavity, and œdema of chest wall. The heart's impulse was diffused over the whole of the left chest; sounds clear; no pulse could be detected in the left subclavian, brachial, and radial arteries, but an impulse could be felt in left internal carotid. The pupils were equal, voice unchanged, and there was no dyspnœa. The patient died on 5th December, 1875, patches of gangrene having appeared on the left mamma two days before death. The left pleural cavity contained three pints of pus.

Reported by Dr. Greenhow in *Clin. Soc. Trans.*, vol. ix, p. 109; see also *P. M. Table*, No. 256, in M. H. Report for 1875.

1088. A Heart, with the left Ventricle laid open, and the arch of the Aorta, showing an aneurism of the first portion of the arch opening into the left auricle. The cavity of the ventricle is dilated and its walls hypertrophied.

1088A. The arch of an Aorta, with a portion of the left Lung, showing in section an aneurism the size of a large orange, almost completely filled with laminated clot. The orifice of the sac, situated just beneath the origin of the innominate artery, is about the size of a sixpenny piece, and is almost closed. The sac has encroached upon and displaced the lungs.

OF THE THORACIC AORTA.

1089. A Thoracic Aorta, with part of the Heart and the Lower Dorsal Vertebræ. The lower part of the thoracic aorta is dilated into an aneurism the size of a fœtal head, partially filled with laminated fibrine. It is adherent to the vertebræ, the bodies of the last three dorsal and the first lumbar being deeply eroded. Before death rupture took place into the right pleural cavity, which was found filled with blood. The coats of the artery above the aneurism are very atheromatous. The foramen ovale is patent, and has a coloured glass rod passed through it.

From a man, aged 49. The liver was cirrhotic.

Presented by Mitchell Henry, Esq.

OF THE INNOMINATE ARTERY (Aorto-Innominate Aneurism).

1090. The arch of an Aorta and the great Vessels. Springing from the posterior wall of the innominate artery at its origin is a large saccculated aneurism the size of two fists; it projects upwards and to the right. It is nearly filled with laminated fibrine. The left innominate vein is completely flattened by the tumour, and with the ending of the subclavian vein is filled by adherent fibrine.

1091. The arch of an Aorta, with part of the anterior thoracic wall on the right side. Springing from the innominate artery and involving the adjacent part of the arch is an aneurismal sac the size of a fœtal head. It projects upwards and forwards, has caused absorption of part of the sternum, clavicle, and first rib on the right side, and has forced the second rib downwards. It appears as a large tumour through the thoracic walls between the clavicle and second rib. There is also an aneurismal dilatation of the arch of the aorta.

1092. The arch of an Aorta, with a Larynx, Trachea, and Manubrium, dried and varnished. Springing from the innominate artery is an aneurism, which projects upwards into the neck, where it forms a globular tumour the size of a large orange, which appears to rest on the top of the sternum. It reaches to the level of the upper border of the thyroid cartilage, and envelopes and conceals the right sterno-clavicular articulation. The arch of the aorta also forms an aneurismal dilatation.

1093. The arch of an Aorta, and the large Vessels, showing an aneurism roughly cone-shaped, situated at the origin of the innominate artery and adjacent part of the aorta. The walls of the aorta are thickened from atheroma. The innominate vessel passes upwards behind the sac of the aneurism, and the right common carotid arter yfor a distance of about one and a half inches is completely obliterated. A ligature is seen around the jugular vein; it was placed there at the operation undertaken for ligature of the common carotid.

From a woman, aged 43, who had suffered for six months from symptoms of intrathoracic aneurism. Tufnell's treatment was tried but failed; and an attempt was made to ligature the artery 25th November; the internal jugular vein was wounded, and ligatured in two places. The patient died 9th December, 1882.

Vide *Med. Chir. Trans.*, vol. lxvi, p. 93.

Presented by Henry Morris, Esq.

OF THE COMMON CAROTID ARTERY.

1094.

OF THE SUBCLAVIAN AND AXILLARY ARTERIES.

1095. The Axillary Artery of the right side, with the cords of the Brachial Plexus. The artery in the first and second part of its course is dilated, forming an aneurism the size of a hen's egg, spindle-shaped, and with a slight constriction one inch from its upper extremity. The sac is laid open, and is seen to be partially filled with laminated clot adherent to its walls. Through the centre there is a channel about equal in size to the artery above and below. The axillary vein is adherent to the sac, and is stretched over it, whilst to the inner side is the median nerve.

See *P. M. Reg.*, 1876, No. 52.

OF THE BRACHIAL ARTERY AND ITS BRANCHES.

1096. The Brachial and the upper part of the Ulna Artery, three-quarters of an inch below its origin. The ulnar artery is dilated into an aneurism the size of a hen's egg; it has thick walls and is lined by a thin layer of fibrine. The ulnar artery below the aneurism is of small size; it passes along the posterior wall of the sac nearly to its upper end, and communicates with it by an orifice not larger than a pin hole.

From a man, aged 47, who had disease of the heart and kidneys, with frequent attacks of purpura. Digital compression of the brachial was kept up for fifty hours without producing much effect. The patient died in a fit several months after the compression.

Vide *Med. Times and Gazette*, 22nd November, 1862.

Presented by Campbell De Morgan, Esq., F.R.S.

CEREBRAL ARTERIES.

1097. The anterior part of a left Cerebral Hemisphere, with the Pons and Medulla. The posterior part of the left cerebral lobe is hollowed out into a deep cavity reaching from the base of the brain to the upper surface of the corpus striatum; this is occupied by a thin-walled aneurism of the internal carotid artery nearly filled by coagula. It has burst at its upper part, and extravasation has taken place into the lateral ventricle and into the pia mater

of the cerebrum. The optic nerve is flattened and the roots of the olfactory nerve absorbed. The body of the sphenoid was hollowed out.

From a woman, aged 52, who was admitted into the Hospital 14th April, 1848, suffering from a violent headache, with slight weakness and numbness of the right extremities. A week previously she had been attacked by rigors; at 3 a.m. on the morning following admission she was suddenly seized by apoplectic symptoms, and died in four hours.

Vide *Med. Times*, vol. xli, p. 736.

1098. The Arteries from the base of a Brain, showing a sacculated aneurism the size of a chestnut about half an inch from the origin of the left middle cerebral artery. It is filled with laminated fibrine, except in its innermost part, where a free channel existed continuous with the lumen of the vessel.

From a young man, aged 20, who was admitted into the Hospital 12th January, 1876. Between eight and nine years before his death he received a kick from a horse over lower part of chest on left side, followed by haemoptysis. Before admission he had suffered from shortness of breath and pain in the chest for six weeks. There was a loud blowing systolic murmur most intense over upper part of precordia, where a purring thrill could be felt. On 8th April he showed signs of mental confusion, with aphasia, but no paralysis. The aphasia gradually disappeared, but he continued to fail in strength, and died 3rd June. There was white softening of the anterior half of the temporo-sphenoidal lobe. There were several pulmonary aneurisms and infarctions in lungs and spleen.

See Clinical Lecture by Dr. Henry Thompson in the *Med. Times and Gazette*, 1877, vol. ii.

The heart was the seat of septal aneurism.

1099. The Arteries of the base of a Brain detached. The right middle cerebral artery three lines from its origin is dilated into an oval aneurism four lines in length and three in breadth; its coats, which are partly calcified, are ruptured at one point to the extent of about a line. When recent there was attached to the aneurism at the point of rupture a large fresh coagulum which was continuous with a clot embedded in the right hemisphere, passing into and filling the lateral ventricle.

From a man, aged 24, who died in the Hospital 11th July, 1861. For some months he had been subject to epileptic fits, characterised by loss of consciousness and convulsions. On the day preceding his death he had been drinking, and at five p.m. he fell down in a fit and died comatose in eight hours.

Reported by Dr. Murchison, *Path. Soc. Trans.*, vol. xiii.

1100. The base of a Brain. Immediately in front of the pons varolii on the right side is a tumour the size of a hazel nut, formed by an aneurism of the internal carotid artery. The right third nerve passes downwards below the aneurism, and is closely connected with it.

1101. The base of the right half of a Brain. Embedded in the middle and posterior lobes of the right cerebral hemispheres, springing from the posterior cerebral artery, is an aneurism the size of a small hen's egg, entirely filled by concentric laminæ of dark fibrine. It projected into the lateral ventricle, and filled up the descending cornu. The ventricles were found filled with loose, coagula and bloody serum from the ruptured aneurism. The surrounding brain substance was in a state of softening.

From a man, aged 56, who died suddenly 13th October, 1855. He had suffered from gout for about twelve years, and for twelve months from pain in the head and vertigo. The kidneys were contracted and granular.

Reported in *Path. Soc. Trans.*, vol. vii, by Dr. Van Der Byl.

1102. A Brain, with the roof of the lateral ventricles removed. The basilar artery about its centre is dilated into an aneurism about three-quarters of an inch in diameter. The lateral ventricles are greatly dilated.

From a woman, aged 53, who died in the Hospital, 21st November, 1855. Five years previously she became suddenly deaf, and this condition remained permanent. Three years afterwards she had an apoplectic seizure accompanied by left hemiplegia, and two similar

seizures took place in the course of the two following months. She partially recovered from the paralysis, but latterly lost strength, and began to suffer from dysuria and retention, for which she was admitted into the Hospital six weeks before her death. She was gradually improving, when she suddenly uttered a scream, became comatose, and died the next day. There was found extensive extravasation of blood at the base of the brain from the bursting of the aneurism. The auditory nerve in the temporal bone was found atrophied, but did not appear to have been compressed by the aneurism, but there was probably obstruction of the auditory branches of the basilar artery.

Reported by Dr. Van Der Byl, *Path. Soc. Trans.*, vol. vii, p. 122.

ABDOMINAL AORTA.

1103. An Abdominal Aorta, with the Lower Dorsal and Lumbar Vertebræ. Springing from the posterior wall of the aorta above the origin of the cœliac axis is a sacculated aneurism about the size of a fœtal head. It is bounded behind by the spinal column, and the lower ribs on the left side. The bodies of the lower dorsal vertebræ are extensively eroded, while the intervertebral discs are but little affected. The heads of the two lasts ribs and their attachments are also eroded, so that the ends of the ribs lie loose in the cavity of the aneurism. The diaphragm forms the upper wall of the sac, and a ragged elongated opening is seen in it on the left side, through which the sac communicated with the pleural cavity.

The patient was a policeman, aged 46, who had been a soldier and lived freely. About two years before his death he had received a contusion in his back, but had no particular symptoms for eighteen months, when he was attacked with pain in the left hypochondrium, with severe paroxysmal exacerbations, extending to the umbilicus and down to the testicle. This began in November, 1851; in February, 1852, a pulsating tumour suddenly appeared in the left back at the level of the tenth and eleventh ribs, half an inch from the spine. From this time he survived three weeks, and died suddenly. The pain continued unabated.

Presented by W. R. Vickers, Esq.

1104. An Abdominal Aorta. Springing from its posterior wall, opposite the origin of the cœliac axis, is an aneurism, which communicates with the vessel by a rounded aperture rather larger than the calibre of the aorta itself. Only part of the sac is preserved.

1105. An Abdominal Aorta. Springing from the anterior wall is an irregular sacculated aneurism the size of two fists, communicating with the aorta by an orifice the size of a crown piece; it involves the origin of the right renal artery. At its lower part is a large ragged rupture in its walls.

1106. An Abdominal Aorta, laid open along the posterior wall, showing a fusiform aneurism, six inches in length, with a constriction in the centre. Each of the two sacs thus formed is of the size of a hen's egg; the upper is lined by laminated clot; the lower also contains some similar clot adherent to its right wall. The whole aorta is dilated, and exhibits patches of atheroma in all stages up to the formation of calcareous plates. The large branches of the vessel which arise from the upper sac are also atheromatous.

See *P. M. Reg.*, 1876, No. 70.

1107.

BRANCHES OF THE AORTA.

1108. An Abdominal Aorta, with its branches, showing a spindle-shaped aneurism of one of the main divisions of the superior mesenteric artery. It is about equal in size to an acorn, and is filled with compact layers of laminated fibrine, except for a channel on one side about equal in size to a good sized probe.

See *P. M. Reg.*, 1879, No. 98.

ILIAC ARTERIES.

1109. The lower part of an Abdominal Aorta, with the Iliac Arteries. The aorta is studded throughout with raised patches of atheromatous deposit of a yellow colour. Situated upon the right common iliac artery there is a fusiform aneurism the size of a swan's egg. The sac has ruptured at the upper end, where an irregular rent is seen. The left common iliac artery is also dilated, but there is no distinct aneurism.

From a man, aged about 65, who was admitted into the Hospital for severe abdominal pain, referred to the pelvis, the cause of which could not be discovered. At his death, which occurred rather suddenly two days afterwards, the retro-peritoneal tissue of the pelvis was found to be filled with blood, which had escaped from the ruptured sac of the aneurism. The arteries throughout the body were atheromatous.

Dissected by Dr. J. J. Pringle.

FEMORAL.

1110. The Femoral Arteries, showing a fusiform aneurism, one on each vessel. The one which has been laid open was found to be converted into an abscess. The sac contains some laminated fibrine. The lumen of the artery is obliterated for a part of its course.

1111.

POPLITEAL ARTERY.

1112. The lower half of a Femur, with the Popliteal Artery, the upper part of which is dilated into an oval aneurism about five inches in length. The back of the femur is exposed in the posterior wall of the aneurism, and superficially eroded.

Presented by R. Cartwright, Esq.

1113. A superficial Femoral and Popliteal Artery. The latter is dilated into an aneurism the size of a cocoa-nut.

1114. A Popliteal Artery. Its posterior wall is dilated into an aneurism about three inches in diameter, lined by a layer of opaque fibrine.

Presented by A. Shaw, Esq.

SPECIMENS ILLUSTRATING THE MODE OF CURE OF ANEURISM.

SPONTANEOUS CURE.

By Deposit of Laminated Fibrine.

1115. An Abdominal Aorta, laid open, showing the orifice of a sacculated aneurism, situated on a level with the renal arteries, which has undergone spontaneous cure by the sac becoming filled with laminated fibrine. The aorta is atheromatous.

DEPOSIT OF BLOOD CLOT OR LAMINATED FIBRINE, FROM LIGATURE OF, OR PRESSURE ON, THE ARTERY SUPPLYING THE ANEURISMAL SAC.

1116. A Popliteal Artery, the seat of an aneurism. The sac, which is laid open, is about equal in size and similar in shape to an acorn, and arises from the front of the vessel. It is filled with an adherent, lamellated, tough fibrous clot, which completely obstructed it.

From a man, who was admitted in the Hospital in April, 1874, for popliteal aneurism. The case was treated by alternate pressure on the common femoral artery at the groin, and the superficial femoral, just above Hunter's canal. The pressure was maintained for five hours daily, and the case was cured in a fortnight.

See *Path. Soc. Trans.*, vol. xxvi, p. 39.

Presented by J. W. Hulke, Esq., F.R.S.

SPECIMENS ILLUSTRATING THE PROGRESS OF ANEURISM. RUPTURE OF ANEURISM.

INTO THE THORACIC CAVITY.
INTO THE PERICARDIUM, *No.* 1078.
INTO THE CAVITIES OF THE HEART.
INTO THE PLEURAL CAVITY, *No.* 1089.
INTO THE TRACHEA.
INTO THE BRONCHUS, *No.* 1079.
INTO THE ŒSOPHAGUS *No.* 1084.
INTO THE PULMONARY ARTERY, *Nos.* 1082, 1083.
INTO VEINS.
INTO THE PERITONEAL CAVITY, *No.* 1105.
INTO INTESTINE.
INTO THE BRAIN OR ITS MEMBRANES, *Nos.* 1097, 1099, 1101.
EXTERNALLY.

THE PRESSURE EFFECTS OF ANEURISM.

PRESSURE ON BRONCHUS, *No.* 1081.
PRESSURE ON TRACHEA, *No.* 1086.
PRESSURE ON NERVES, *No.* 1086.
PRESSURE ON AND OBLITERATION OF VEINS, *Nos.* 1071, 1072, 1080, 1090.
EROSION OF VERTEBRÆ, *Nos.* 1087, 1103.
PENETRATION OF THE CHEST WALL, *Nos.* 1085, 1091, 1092.

OBLITERATION AND COMPRESSION OF ARTERIES.

FROM DISEASE OF THE VESSEL.

1117. The Abdominal Aorta, presenting extensive atheroma, a patch of which corresponds with an obliteration of the origin of the superior mesenteric artery. A bristle transfixes the artery close to its origin.

Presented by R. Cartwright, Esq.

BY PRESSURE OF ENLARGED GLANDS AND NEW GROWTHS.

1118.

EMBOLISM AND THROMBOSIS OF ARTERIES.

1119. 1120.

1121.

1122. The base of a Brain, showing the vertebral and basilar arteries and the circle of Willis. The left vertebral artery is plugged by an adherent clot, and its two inferior cerebellar branches, which are very tortuous, are also thrombosed; there is softening of the posterior two-thirds of the left lobe of the cerebellum.

From a man, 42 years of age, who was admitted on 28th October, 1876, with marked left facial palsy of three days' duration, pain in left side of head, impaired speech, and difficulty in deglutition; on protrusion the tongue pointed to the left. He died in twelve hours from pulmonary engorgement.

Reported in *Med. Times and Gazette*, 1877, vol. i.

1123. A Heart and the principal Arteries, with the Spleen and the right Kidney. The edges and auricular surface of the mitral valve are covered with large, soft, loosely attached vegetations, which are also seen on the lining membrane of the auricle. The abdominal aorta at the origin of the cœliac axis, and the

cœliae axis itself, are filled with a firm coagulum extending below the origin of the renal arteries. At the bifureation of the aorta are firm yellowish-white masses presenting the same characters as the mitral vegetations. These are partially enveloped in the blood clot, and this mixed mass extends for about half an inch into the eommon iliacs. Below this these vessels are filled with blood coagulum to their division, where are again seen deposits resembling the mitral vegetations, especially in the internal iliaes. In the right one the coats are thiekened, and there is a small eavity in them which in the recent state was filled with puriform fluid; a similar smaller cavity exists in the recent coats of the left one. The external iliaes and femorals, with the exeeption of the right profunda and tibia, are filled with coagula, and in many plaees the inner and middle coats are separated by curdy puriform matter. In the right brachial artery a firm coagulum is visible, and there are triangular embolisms in the kidneys and spleen.

From a woman, aged 30, who died in the Hospital, 13th February, 1861. She had had rheumatie fever, and suffered from palpitation and dyspnœa. At the end of December, 1860, she was suddenly seized with severe pains in the left calf, and gangrene of the foot supervened. On 11th February, 1861, she was attacked by severe pain in the right arm, and the radial pulse eeased to be perceptible. There was a loud systolie apex murmur. She suffered from great dyspnœa, and gradually sank.

1124. A Heart and the principal arteries, with the Kidneys and Bladder. On the auricular surfaee of the mitral valve, and on the lining membrane of the auriele, are numerous soft vegetations loosely attached. The right subclavian and the eommencement of the right axillary arteries, the left earotid, and the iliae arteries on both sides, are obstrueted by firm coagula; there are numerous embolisms in the kidneys. There was also found plugging the right middle eerebral arteries an extensive extravasation of blood on the surfaee of the araehnoid at the base of the brain.

From a girl, aged 17, who died in the Hospital, 20th May, 1861. She had had two attacks of rheumatie fever. She was admitted 5th Mareh with symptoms of rheumatie perieardítis, which had come on suddenly; there were also the signs of old mitral regurgitant and aortic obstructive and regurgitant disease. On 23rd April she was suddenly seized with intense pain in the legs below the knees, and the feet became eold, and blue patehes appeared on the toes. The gangrene gradually extended, and on the right side reached as high as the knee; 19th May the left arm beeame cold and pulseless. She died without any head symptoms except slight delirium.

Reported, with the preeeding ease, by Dr. Goodfellow in *Med. Chir. Trans.* vol. xlv, p. 367.

1125. The Aorta and prineipal Arteries of the lower extremities, with the right Kidney. From the origin of the renal arteries downwards the aorta and the arteries of the lower extremities, with the right renal artery, are bloeked with firm eylinders of fibrine.

From a woman, aged 45, who died with gangrene of the legs after typhus fever. On the seventeenth day of the fever, when apparently beginning to eonvalesce, she was suddenly seized with severe pains shooting down the left leg and thigh, whieh beeame swollen, eold, and at last gangrenous. Fourteen days afterwards the toe of the right foot beeame gangrenous, and she gradually sank. The heart was normal.

Reported by Dr. Murehison in *Path. Soc. Trans.*, vol. xvi, p. 93.

1126. The lower part of an Aorta and the Iliae Arteries. These vessels are plugged by firm eylinders of fibrine.

From a woman, who died after amputation of the leg for gangrene. There was a large uterine fibroid tumour pressing on the abdominal aorta.

1127. The bifurcation of the Aorta with the left iliae and femoral arteries and veins. The upper part of the left eommon iliac artery is oeeupied by a firm yellowish-white mass of fibrine about an inch in length, which projects into the aorta; below this the iliac and femoral vessels are plugged by coagula. The iliae and femoral veins are similarly plugged.

From a woman, aged 39, who died in the Hospital, 6th March, 1856. She was two months advanced in pregnancy. Three weeks before death she felt shooting pains, with numbness and coldness, in both legs and feet; these symptoms, on an occasion shortly after the patient had been stooping to pick up a pin, suddenly ceased in the right leg and became increased in the left one, which gradually became gangrenous from the middle of the thigh downwards. Both the right and left cavities of the heart contained three or four white coagula the size of a hazel nut, closely resembling the mass at the origin of the left iliac artery.

Reported by W. H. Flower, Esq., in *Path. Soc. Trans.*, vol. vii, p. 175.

1128. A right Femoral and Popliteal Artery. Adhering to its inner wall, a little above the bifurcation, is an opaque yellow ragged looking fibrinous mass enveloped by more recent coagula.

From a woman, aged 35, who was the subject of mitral constriction and vegetations. She had never had rheumatism. On 9th September, 1863, two days after unusual exertion, she was attacked by rigors and fever, with pain, which soon became excruciating, down the right leg from the knee. Four days later the leg became gangrenous, but a line of demarcation formed two inches below the knee, and she survived a month. When recent the centre of the thrombus in the popliteal artery is stated to have closely resembled the mitral vegetations.

Presented by Dr. Cooper Rose.

1129. The Popliteal and Posterior Tibial Arteries, which are lined throughout the greater part of their length with adherent fibrine. From a case of senile gangrene.

1130. A Radial Artery, which is blocked at about the middle by an adherent mass of fibrine an inch in length. The pulsation of the vessel was missed for about ten days before death. Round the thrombus the coats of the artery were thickened and inflamed.

From the same patient as the preceding specimen.

1131. A Femoral Artery and Vein. A ligature was placed round the lower end of the artery six days before the patient's death. For a distance of nearly two inches the vessel is occupied by a coagulum firmly adherent to its walls; the whole of the vein is plugged by similar clot.

From a case of amputation of the thigh, following partial resection of the knee joint, for necrosis of the head of the tibia.

1132. The Arteries of the lower extremities, plugged in various places by fibrinous coagula.

BLOOD CLOTS REMOVED FROM ARTERIES.

1133. A branched fibrinous Clot removed from the pulmonary artery.

ENTOZOA IN ARTERIES.

1134.

SERIES XV.

INJURIES AND DISEASES OF VEINS.

INJURIES OF VEINS.

1135. The inferior Vena Cava with the Iliac Veins and the bodies of two Lumbar Vertebræ, showing ulceration with thrombosis of the vena cava, and thrombosis of the iliac veins from entrance of a needle into the cava.

Reported in *Clin. Soc. Trans.*, vol. vi, p. 19.

Presented by Dr. Henry Thompson.

DISEASES OF VEINS.

VARICOSE DILATATION.

1136. A piece of the Skin of a Leg, with the internal Saphena Vein, which is very greatly dilated and remarkably tortuous.

Taken from a dissecting-room subject.

Presented by W. H. Flower, Esq., F.R.S.

1137. The lower part of the Inferior Cava and the Iliac Veins. The lower four inches of the cava, with the right iliac veins, are enormously dilated. There is also dilatation, but to a much less degree, of the left iliac veins. This part of the vena cava and the right common iliac are occupied by firm decolorised fibrinous coagulum, adherent, except at its upper part, to the lining membrane of the veins. Below this the vein is filled with black loose clots, at some points adherent to the coats. These coagula extended throughout the veins of the lower extremity. Where the coagula are adherent, the coats of the veins, especially of the cava, are thickened. The upper part of the left common iliac vein is empty; below, it and the veins of the lower extremity are plugged by coagula.

From a man, aged 27, who died in the Hospital, 12th December, 1861. He had extensive tubercular deposits with large cavities in the lungs, partly gangrenous. There was great œdema of the lower extremities. *P. M. Reg.*, No. 337, vol. v.

CALCAREOUS DEGENERATION.

1138.

SUPPURATIVE PHLEBITIS.

1139.

ULCERATION EXTENDING INTO VEINS.

1140.

THROMBOSIS OF VEINS.

ORGANISATION AND CALCIFICATION OF BLOOD CLOTS IN VEINS.

1141. A left Ovary, with the Broad Ligament, the Ovarian Vein, and part of the inferior Vena Cava. The ovarian vein, throughout a large part of its

course, is plugged by adherent fibrine. There is a small corpus luteum in the ovary.

From a woman, who died of puerperal fever.

1142. The Femoral and external Iliac Veins. The femoral vein is occupied by a layer of fibrine, which adheres to the lining membrane, but does not completely fill the cavity; it blocks up the branches and reaches into the external iliac vein, where it ceases to be adherent.

1143. A right Femoral Vein and some of its branches. It is greatly dilated, and blocked by firm dark coagula, in parts adherent to the lining membrane. The thrombosis in this case was caused by the pressure of an enormous sacculated dilatation of the bladder.

Reported by Dr. Murchison, in *Path. Soc. Trans.*, vol. xiv, p. 133.

1144. Part of a Vein and its accompanying artery in two lengths. The vein is occupied by a cylinder of fibrine, in part adherent. The coats of the vein appear thickened.

1145. Part of a large Vein. Its lining membrane is in places lined by a layer of adherent fibrine.

1146. The Falx Cerebri and Tentorium. The longitudinal and right lateral sinuses are laid open, showing them to be completely blocked by fibrinous coagula. Some veins leading into the former are also filled with thrombi.

From a single woman, aged 17, who was admitted into the Hospital 13th November, 1883, and died 16th November, 1883.

There was a history of headache and indisposition for a fortnight, and of sudden loss of consciousness and inability to move on the day previous to admission.

She was absolutely unconscious; surface irritation provoked attacks of rigidity involving all the limbs excepting the right arm, and lasting from half to one minute. The deep reflexes were exaggerated only during these periods of spasm. There appeared to be loss of sensibility in the left leg only. The reflex excitability was gradually replaced by paralysis, which finally involved the muscles of respiration. The temperature before death rose to 103·4° F.

There were extensive hæmorrhages, chiefly petechial, into both hemispheres of the brain.

1147. The Falx Cerebri and Tentorium Cerebelli, with other portions of the Dura Mater. The longitudinal sinus, which is laid open, is seen to be completely filled with a fibrinous clot which extends from the crista galli to the Torcular Herophili, and thence into the right lateral sinus. The left lateral sinus is free from clot. The veins opening into the longitudinal sinus are all filled with thrombi. There were numerous hæmorrhages, some petechial, others larger extravasations, in the centrum ovale and cortex of the right hemisphere, and to a less extent in the left also. In the former the hæmorrhages were of largest size in the frontal convolutions, in the posterior parietal lobule, the upper and posterior extremity of the angular gyrus, and the extremity of the supra marginal lobule.

From a female, aged 21, married, who was admitted into the Hospital 28th April, 1884, and died 29th April.

She was in the fifth month of pregnancy. There was a history of constant vomiting for seven days, and of unconsciousness with frequent convulsions for three days previous to admission. On admission there was complete paralysis, alternating with spasms of one to ten minutes' duration, occurring about every quarter of an hour, and affecting exclusively the face and limbs on the left side; the patient was never conscious. The urine was highly albuminous. For two hours before death the convulsions ceased. Paralysis finally involved the muscles of respiration. An unsuccessful attempt was made to induce premature labour.

OBLITERATION OF VEINS.

SERIES XVI.

INJURIES AND DISEASES OF THE NOSE, MOUTH, TONGUE, PALATE, AND FAUCES.

SUB-SERIES.—DISEASES OF THE TEETH.

MALFORMATIONS.

1148. The Mouth of a "slink" Calf, showing a right hare-lip.

1149.

Vide Specimen No. 1156.

INJURIES.

1150.

DISEASES OF THE NOSE.

POLYPI.

1151. A section of a Nose and Palate, showing a polypus in the upper fossa of the nose.

From a man, aged 40, a dissecting-room subject.

1152. A Polypus removed from the nose.

1153. A similar specimen.

TUMOURS OF THE ANTRUM.

1154. A growth springing from the Hard Palate, and involving the antrum.

DISEASES OF THE LIPS AND CHEEK.

1155.

Vide Specimens Nos. 24, 25, 33, 38.

DISEASES OF THE TONGUE.

MORBID GROWTHS.

1156. A Tongue, Pharynx, and Larynx. There is extensive cancerous ulceration on the left side of the tongue; the edges of the ulcer are hard and nodulated. At the junction of the pharynx and œsophagus the tube suddenly becomes narrowed to the calibre of a full size catheter, as if from an incomplete absorption of the original septum between these two divisions of the canal.

The patient a woman, aged 40, had no difficulty in swallowing or other symptoms due to stricture.

1157. The stump of a Tongue after four operations for cancer, with the Larynx and Pharynx. The whole of the tongue in front of the circumvallate papillæ has been removed. The mucous glands behind them are much enlarged, but there is no cancerous infiltration.

From a man, on whom Mr. Moore performed four operations at different times for cancer of the tongue. He died after the last operation of cystitis and sacculated kidneys, the result of urethral stricture. The cancer did not return.

Surg. P. M. Reg., vol. ix, No. 46 ; *Surg. Reg.*, 1869, No. 147.

1158. An epitheliomatous growth removed from the tongue by operation.

1159. A Tongue, with the Pharynx and Larynx. The right half of the tongue from the tip backwards is extensively destroyed by cancerous ulceration. The margins of the ulcer are shreddy, ragged, and nodulated. A large cavity extends from the growth from it into the neck.

1160. The anterior two-thirds of a Tongue which was removed by the écraseur. On the dorsum of the left half an irregular oval cancerous ulcer, with raised thick margins, is seen.

Vide Series XIV, No. 1044.

DISEASES OF THE GUMS AND HARD PALATE.

EPULIS.

Vide Specimen No. 608.

TUMOURS OF THE HARD PALATE.

1161. A small flattened lobulated fibro-cellular tumour which was attached by an extremely narrow pedicle to the roof of the mouth close to the stump of the right upper lateral incisor, over which a false tooth had been worn.

From a man, aged 25. It was of six months' growth. After removal the pedicle bled freely.

DISEASES OF THE SOFT PALATE AND FAUCES.

ULCERATION.

1162. Fauces and Larynx of a child. The tonsils and soft palate are extensively ulcerated, and are covered with villous and granular vegetations. Similar vegetations are visible on the vocal cords.

TUMOURS OF THE SOFT PALATE.

1163.

FOREIGN BODIES IN FAUCES.

1164.

Vide No. 1193.

DISEASES OF THE TONSILS.

ULCERATION.

1165.

Vide Specimen No. 1162.

ENLARGEMENT AND NEW GROWTHS.

1166.

SUB-SERIES.—DISEASES OF THE TEETH.

MALFORMATIONS OF THE TEETH AND JAW.

1167.

GERMINATION OF TEETH.

1168.

DEFERRED SHEDDING OF MILK TEETH.

1169.

EFFECTS OF ATTRITION.

1170.

ABSORPTION OF FANGS.

1171.

ALVEOLAR ABSCESS.

1172.

CARIES.

1173. Section of a Tooth of a Horse, showing caries.

Presented by Dr. Cooper Rose.

1174. A Lower Jaw. On the left side the anterior molar is represented by one fang only, which is being forced out of its socket; the second and third molars present a normal crown, but the body of each tooth is almost completely gone, the outer part being eaten away by caries. On the right side a very similar condition exists, only a single fang of the first molar being left; the second molar has a normal crown, but is undermined by caries; the wisdom tooth has all but disappeared.

For history of case, *vide* Series III, No. 157.

Presented by J. B. Sutton, Esq.

NECROSIS.

1175.

OTHER DISEASES.

1176. A last upper Molar Tooth encrusted with tartar. From an aged person.

1177. A Molar Tooth thickly encrusted with tartar.

ODONTOMES.

ODONTOME CORONAIRE.

1178.

EXOSTOSIS.

1179.

FRACTURE OF ALVEOLUS.

1180.

SERIES XVII.

INJURIES AND DISEASES OF THE LARYNX AND TRACHEA.

MALFORMATIONS.

1181.

INJURIES.

1182. The Trachea and Bronchi with part of a right Lung. Several of the tracheal rings are fractured, and the trunk of the right bronchus is torn across. Several of the ribs were broken, but the lungs were not injured. All the upper part of the body was emphysematous.

From a young man, who was run over by a cart.

1183.

LARYNGOTOMY AND TRACHEOTOMY.

1184. A Larynx and the upper part of the Trachea of a man, on whom laryngotomy was performed seven years before his death for laryngitis. A trocar was plunged into the larynx, dividing the cricoid cartilage a little to the right of the median line. The divided ends are loosely united by ligament, the right one overlapping the left. The posterior part of the cricoid cartilage is consequently displaced, and its plane is inclined forwards and downwards to the right. The right arytænoid cartilage is anterior to and lower than the left one, and the epiglottis is oblique. The right half of the thyroid cartilage is in advance of the left. The two upper rings of the trachea are tucked in under the cricoid cartilage, and at this spot the trachea is contracted.

The case was originally under the care of Mr. Tomes.

1185. A Larynx and the upper part of the Trachea. The under surface of the epiglottis and vocal cords are covered with thick granular-looking false membrane. Below the vocal cords a thick layer of false membrane is seen detached from the mucous surface and coiled round a probe introduced in the larynx. A tracheotomy incision is seen in the anterior wall of the trachea.

1186. A Pharynx, Tongue, and the upper part of the Trachea. The chordæ vocales, part of the epiglottis, and nearly all the laryngeal mucous membrane are destroyed by ulceration. The ulcerated surface is covered with rugged

granulations. There is a fistulous communication between the larynx and pharynx, from which a long sinus extends downwards, between the pharynx and trachea. The thyroid cartilage is necrosed; one ala is separated from the other, and some pieces of ossified cartilage in a state of necrosis are exposed in various parts of the larynx. An opening made by the operation of laryngotomy is seen in the crico-thyroid membrane. The disease was probably of syphilitic origin.

1187. The Larynx and upper part of the Trachea. The right vocal cord is destroyed by ulceration; the rest of the mucous membrane is also extensively ulcerated and thickened by tubercular infiltration. The mucous membrane of the upper part of the trachea also presents tubercular infiltration, and is studded with punctated follicular ulcers. Tracheotomy has been performed.

1188. The Larynx of a child, laid open in front, showing a patch of partially detached false membrane lying under the epiglottis. Tracheotomy has been performed.

1189.

1190.

FOREIGN BODIES IN THE AIR PASSAGES.

1191. A Larynx and part of the Trachea laid open from behind. Impacted within the larynx, below the cords, is a portion of necrosed bone. The mucous membrane covering the arytænoid cartilage and right ary-epiglottic fold is ulcerated; there is also a shallow ulcer on the under surface of the epiglottis. The right vocal cord appears to be thickened.

See *P. M. Reg.*, 1878, No. 43.

1192. The Larynx of an infant, aged 6 months. Impacted in it is a curved piece of nutshell, the upper pointed extremity of which is hooked into the left laryngeal sinus.

The child was brought to the Hospital in a state of urgent dyspnœa, which had come on without any known cause a few hours before. Tracheotomy was performed, and a tube introduced, but the child did not rally.

Path. Soc. Trans., vol. xvii, p. 33.

1193. A Pharynx and Larynx, with the upper part of the Œsophagus and Trachea. Impacted in the pharynx and completely obstructing the larynx is a large piece of a mutton chop.

From a man, who, in apparently good health, entered an eating house and ordered a chop. Whilst he was eating it the waiter left the room for a few minutes, and on his return found him sitting in his chair quite dead. He was brought to the Hospital, a post mortem examination was made, and death was attributed to fatty degeneration of the heart. One of the students requiring a larynx for dissection, it was removed, when the true cause of death was discovered.

OSSIFICATION OF CARTILAGES OF LARYNX AND TRACHEA.

1194. The lower part of a Trachea, with the large bronchi. The cartilaginous rings of the trachea are ossified. This change is apparent on looking at their cut ends. The mucous membrane is thickened and opaque, and punctated with the dilated openings of the follicles.

1195.

EFFECTS OF INFLAMMATION.

ŒDEMA GLOTTIDIS.

1196. The Larynx of a child. The mucous membrane about the glottis and also the arytæno-epiglottidean folds are much swollen by œdema, so as almost completely to close the chink of the glottis.

1197. The Larynx of a young person. The mucous and sub-mucous tissues of the glottis and arytæno-epiglottidean folds are much swollen by œdema.

DIPHTHERIA.

1198. The Larynx and Trachea of a young woman who died of diphtheria. The mucous membrane from the epiglottis downwards is covered with an opaque, thick, and partially detached false membrane.

1199. The Larynx and upper part of the Trachea of an adult. The mucous membrane from the epiglottis downwards is covered by a thick yellow opaque false membrane, in part detached, and the epiglottis is swollen and œdematous.

From a man, aged 38, who was admitted into the Hospital 1st May, 1855, for diabetes mellitus, from which he had been suffering for three months. He gradually improved till 24th October, when he was attacked by sore throat, accompanied by fever and great prostration. He died 26th October. The false membrane was found to extend into the bronchial tubes.
Med. Reg., vol. ii, No. 191 ; *P. M. Reg.*, No. 393.

1200. The Bronchi from the preceding case. They are blocked up by false membrane, forming fibrinous casts.

1201. A Larynx, with the Trachea and Bronchi. From the under surface of the epiglottis downwards the mucous membrane is lined by a thick, opaque, yellow, false membrane, which extends into the bronchial tubes in the substance of the lung.

1202. The Fauces, Pharynx, and Larynx of a child. The mucous membrane of the upper surface of the epiglottis and pharynx is covered with a thick layer of granular false membrane, small patches of which are also seen in the upper part of the œsophagus. In the larynx the false membrane is seen about the chink of the glottis, but does not extend lower.

1203. The Fauces, Larynx, Trachea, and Bronchi. From the epiglottis downwards the mucous surface is lined by a thick layer of opaque yellow false membrane, which extends into the bronchial tubes, on the left side blocking up with solid cylinders tubes not more than a line in diameter. The epiglottis is œdematous, the tonsils enlarged, and on the right one are flocculi of false membrane.

From a boy, aged 8 years. The disease commenced in the fauces. There was entire absence of respiratory sounds over the left lung, but the percussion note was normal.
Vide Nos. 1188, 1189.

Presented by John Gregory Forbes, Esq., December, 1858.

1204.

ULCERATION OF THE MUCOUS MEMBRANE OF THE LARYNX.

Syphilitic Ulceration.

1205. A Tongue and Larynx. The epiglottis is greatly thickened, and its under surface pitted with ulcers. The right superior vocal cord is greatly thickened and nodulated.

From a case of syphilis.

1206. A Tongue and Larynx. The greater part of the epiglottis is destroyed by ulceration, which extensively involves the anterior wall of the larynx. The margins and surfaces of the ulcers are studded with papillary outgrowths. The papillæ of the tongue are much hypertrophied.

From a case of syphilis.

1207. A Tongue and Larynx. The edge of the epiglottis and the glosso-epiglottidean folds are extensively ulcerated, and the laryngeal mucous membrane much thickened. The hyoid bone is necrosed; the extremity of the left greater cornu is seen bare and projecting through the mucous membrane.

From a case of syphilis.

Presented by A. Pearce Gould, Esq.

Tubercular Ulceration.

1208. The Larynx of a young person. There is a deep ulceration of the posterior ends of the vocal cords and also at the base of the epiglottis. The disease was probably of tubercular origin.

1209. A Larynx, of which the epiglottis, the false vocal cords and the greater part of the mucous membrane are destroyed by ulceration. The ulcerated surface is ragged, and in places presents tubercular infiltration. There was tubercular disease of the lungs and other parts of the body.

1210. A Larynx, showing an extensive tract of ulceration extending over the posterior wall on the left side and the left vocal cord, the mucous membrane below which is infiltrated with opaque yellow deposit and pitted with small ulcers. The ulcerated surface is rough, and studded with villous and warty outgrowths.

From a man, aged 52, who died in the Hospital 17th December, 1872, of phthisis, with cavities in the lungs and ulceration of the intestines.

Vide No. 1187.

1211.

STRICTURE OF THE LARYNX.

1212.

NECROSIS OF THE LARYNGEAL CARTILAGES.

Vide Specimens Nos. 1186, 1351A.

1213.

AFFECTIONS OF THE LARYNX IN TYPHOID FEVER.

1214. A Larynx from a case of enteric fever, showing sharply excavated but shallow oval ulcers, involving the anterior two-thirds of each vocal cord, also erosion over a small area below their posterior insertions, especially on the left side.

From a man, aged 30, who died from perforation of the ileum and peritonitis in the (?) eighth week of an attack of typhoid fever.

See *P. M. Reg.*, 1879, No. 39.

1215.

AFFECTIONS OF THE LARYNX IN VARIOLA.

1216.

TUMOURS CONNECTED WITH THE LARYNX OR TRACHEA.

PAPILLOMA.

1217. The Larynx of a young subject. The true and false vocal cords and the base of the epiglottis are covered with masses of papillary or warty outgrowths. Laryngotomy has been performed.

1218.

POLYPUS.

1219.

EPITHELIOMA.

1220.

MALIGNANT OR OTHER GROWTHS, SECONDARILY IMPLICATING OR COMPRESSING THE LARYNX OR TRACHEA.

1221. The Trachea, with a cyst attached to its right side, dried and varnished. The cyst appears to have compressed the trachea, and communicates with that tube by several openings, but it is not clear whether these have been formed before or after death. The carotid and subclavian arteries are in contact, but not in connection with the cyst.

Vide Nos. 1079, 1081, 1086.

1222. A Tongue, Larynx, and Pharynx. Close to the left cornu of the thyroid cartilage the pharynx is perforated by a round orifice which leads into a very irregular cavity formed by an abscess extending across the front of the pomum Adami.

From a man, aged 62, who was thrown from his horse. Fourteen days after an abscess, causing much dyspnœa, formed in front of the neck. This was opened, but he succumbed from pneumonia.

Surg. Reg., 1862, No. 500; *P. M. Reg.*, vol. v, No. 1531.

SERIES XVIII.

INJURIES AND DISEASES OF THE PLEURA, MEDIASTINA, BRONCHI, AND LUNGS.

MALFORMATIONS.

1223.

INJURIES OF THE PLEURA AND LUNGS.

1224.

1225.

DISEASES OF THE PLEURA.

Effects of Inflammation.

ADHESION AND FALSE MEMBRANES.

1226. A portion of a Lung, with the costal pleura. The pleura is much thickened by deposition of organised lymph on its surface, and is united to the lung by firm fibrous adhesions. The lung itself is indurated and deeply pigmented.

1227. A portion of the pleural surface of a Lung. The pleura is much thickened and covered by shaggy masses of recent yellow lymph. The subjacent pulmonary tissue is in a state of grey hepatization.

THICKENING AND INDURATION OF ADHESIONS.

1228. A portion of the Diaphragm, on the pleural surface of which is an oval patch, three inches in length, of nodulated fibrous vegetations.

1229.

CALCIFICATION OF FALSE MEMBRANES.

1230.

SUPPURATION (EMPYÆMA).

1231.

ULCERATION AND PERFORATION.

1232. A portion of a right Lung, the pleural surface of which is covered by a thick layer of lymph; in the centre of it is seen a perforation, partially closed by a fragment of lymph, through which a glass rod is passed. The tissue of the lung is studded with grey and yellow tubercular granulations.

From a man who died with pneumo-thorax.

Presented by Dr. A. P. Stewart.

1233. A section of the lower lobe of a right Lung, which is of nearly black colour and carnified. The pleural surface is covered with a thick layer of tough adherent organised lymph. In the centre is a circular ulcer, the size of a threepenny-piece, perforating into the lung.

From a man, aged 50, who died in the Hospital 28th March, 1856. Sixteen days previously he burnt his knee; this was followed by sloughing, for which he was admitted 22nd March.

Surg. Male Reg., vol. iii, No. 147; *P. M. Reg.*, vol. ii, No. 477.

1234.

MORBID GROWTHS OF THE PLEURA.

TUBERCLE.

1235.

1236.

MALIGNANT GROWTHS.

1237. A portion of Lung with its pleural covering, the surface of which is studded with small cancerous nodules.

1238. Section of the right side of a Thorax, with part of the diaphragm attached to it, showing a number of very vascular cancerous nodules.

The lung of the same side was affected.

Presented by Dr. Goodfellow, 1864.

1239.

DISEASES OF THE BRONCHIAL TUBES.

DILATATION OF BRONCHI.

1240. A portion of Lung, in which the bronchial tubes commencing in their secondary divisions present long fusiform dilatations.

From a boy, aged 15, who died in the Hospital 6th December, 1858, of bronchitis, after an illness of a month's duration. His previous history is unknown. He had emphysema of the lungs, great hypertrophy of the right ventricle of the heart, and anasarca.

P. M. Reg., vol. iii, No. 896; *Med. Reg.*, vol. v, No. 547.

1241. A section of a Lung. The upper part consists of pulmonary tissue, consolidated by inflammation and excavated into two large cavities, the walls of which are formed by shreddy broken down pulmonary tissue. In the lower half the pulmonary tissue is completely destroyed, and the space occupied by a congeries of cavities formed by sacculated dilatations of the bronchial tubes, the walls of which are much thickened. The lung is invested by a dense thick false membrane, which adhered to the thoracic walls.

FOREIGN BODIES IN THE BRONCHI.

1242.

TUMOURS OF THE BRONCHIAL CARTILAGES AND OTHER MORBID GROWTHS.

1243. A portion of Lung with the main Bronchus. Growing from one of the bronchial cartilages is a tumour, the size of a hazel kernel. It blocked the tube and produced collapse of the lung behind it. On microscopical examination it was found to consist of cartilage.

1244.

EFFECTS OF INFLAMMATION.

FORMATION OF FALSE MEMBRANE.

1245. Fibrinous Casts from the smaller bronchial tubes.

1246. A Larynx and Trachea, with two membranous casts from the bronchi.

Presented by H. G. Barron, Esq.

Vide *Lancet*, 1881, vol. ii, p. 905.
Vide Series XVII, Nos. 1188, 1189, and 1198–1204.

ULCERATION AND PERFORATION.

1247.

DISEASES OF THE LUNGS.

VESICULAR AND SUB-PLEURAL EMPHYSEMA.

1248. A portion of Lung from a cow, which died of rinderpest, showing sub-pleural, interlobular and vesicular emphysema.

1249. Sections of a Lung, dried. The air cells are everywhere dilated, but still remain distinct, showing the first degree of vesicular emphysema.

1250. A portion of a Lung. The pleura covering its lower part is much thickened and opaque, whilst the surface of the lung is studded with opaque circular white patches from which white seams branch off. The lung itself is deeply pigmented and its upper part emphysematous.

1251. A portion of Lung, the air cells of which are much dilated, and beneath the pleural surface they have coalesced in groups so as to form projecting bullæ, which vary in size from a millet seed to a large pea, showing the second degree of vesicular emphysema.

1252. Large bullæ taken from an Emphysematous Lung, dried. The bullæ are seen to be intersected in all directions by a network of delicate fibres formed by the remains of the walls of the air cells.

1253. A portion of the apex of a Lung in a state of emphysema. The air cells are much dilated, but still appear for the most part distinct. Dry specimen.

1254. Portions of a Lung, dried and varnished. Projecting from its surface and borders are large bullæ formed by the dilatation and coalescence of groups of air cells. On the surface of the section these bullæ are seen to be intersected by the remains of the pulmonary structure. An advanced stage of vesicular emphysema.

1255. A dried section of the Lung of a lioness, showing several large emphysematous cavities near the surface.

Presented by Dr. Spencer Cobbold, F.R.S.

COLLAPSE.

1256.

EFFECTS OF INFLAMMATION.

PNEUMONIA.

Hepatization and Purulent Infiltration.

1257. A portion of Lung in part consolidated by an opaque yellowish-grey exudation into the air cells. The surface of the section has a finely granular appearance.

1258. A portion of Lung, consolidated throughout from pneumonia (grey hepatization). The large bronchi contain solid fibrinous casts; an example of the condition known as "massive pneumonia."

1259.

1260.

BRONCHO OR CATARRHAL PNEUMONIA.

1261.

CASEOUS PNEUMONIA.

1262.

CHRONIC PNEUMONIA.

1263. Two portions of the lower lobe of a Lung, the texture of which has been consolidated, pigmented, and rendered hard and airless by chronic inflammation, producing the appearance known as "grey or slaty induration." Portions of the lung are undergoing softening, and several small cavities have formed. The bronchi are thickened. The pleural surfaces are adherent below, and both layers are much thickened and rough from deposits of lymph where adhesion has not occurred. The smaller section shows that the lobes are adherent, and the septum much thickened. There is an older cavity at the posterior junction of the upper and lower lobe.

See *Path. Soc. Trans.*, vol. xxx, p. 224.

Presented by Dr. Sidney Coupland.

1264. A portion of the lower lobe of a Lung, consolidated and deeply pigmented from chronic pneumonia, "slaty induration." Softening is proceeding in several places, and small cavities have formed.

1265.

ABSCESS.

1266.

1267.

GANGRENE.

1268. 1269.

1270.

SPECIMENS ILLUSTRATING CHANGES PRODUCED IN THE LUNGS OF WORKMEN FOLLOWING VARIOUS OCCUPATIONS.

1271. Portion of the apex and free border of a Lung which is of a bluish-black colour, intersected by white lines, and generally indurated by thickening of the interstitial tissue.

From a collier, who had worked in ill-ventilated coal mines. After incineration the ash was found to contain a large quantity of silica, showing that the pigment must in great measure consist of inhaled coal dust.

Reported in *Path. Soc. Trans.*, vol. xvi, p. 60.

Presented by Dr. Greenhow, F.R.S.

1272. Portion of Lung from the free margin of the upper lobe; it is of very dark colour, being speckled and streaked with black pigment. On microscopical examination amorphous black pigment was found abundantly deposited in the walls of the air cells. After incineration the ash was found to contain large quantities of silica and alumina.

From a man, aged 30, who had worked as a pitman for twenty years. He was killed by a fall of a stone from the roof of the mine.

Reported in *Path. Soc. Trans.*, vol. xvii.

Presented by Dr. Greenhow, F.R.S.

1273. Portions of the upper lobe of a Lung. The pleura is thickened and mapped out by white lines surrounding deep black circular patches corresponding to pulmonary lobules. The sections show abundant deposit of black pigment in the lung tissue in part arranged round the small bronchial tubes. On incineration 100 grains of dried lung yielded 8·02 grains of ash, of which 3·75 grains consisted of amorphous silica.

Reported in *Path. Soc. Trans.*, vol. xx.

Presented by Dr. Greenhow, F.R.S.

1274. Portions of Lung of a deep black colour, and in part converted into a dense solid tissue with a smooth section, not unlike pieces of india-rubber. In the upper piece, which is taken from the apex, an irregular cavity with ragged black walls is seen, adjacent to one of the solidified portions. The pleura is much thickened, and presents opaque white patches. When fresh, the lung on section exuded large quantities of thick perfectly black fluid. On microscopical examination of the less solid portions, the walls of the air cells were found much thickened and impregnated with black pigment. Tracts of interstitial fibro-nucleated tissue intermixed with black pigment traversed the lung in various directions, and in many places the air cells were filled up by exudation corpuscles which contained black granules. The bronchial glands were enlarged and infiltrated with black pigment. On incineration, 100 grains of dried lung gave 12·92 grains of ash, of which 4 grains consisted of silica.

From a man, aged 65, who had worked in a coal mine from boyhood. He had been incapacitated from work for two years, during which time he had suffered from cough, shortness of breath, and had lost flesh. Ten days before his death he began to spit up large quantities of sputum resembling black paint.

Vide *Path. Soc. Trans.*, vol. xx, p. 41.

Presented by Dr. Greenhow, F.R.S.

1275. A portion of a Lung, of a deep bluish-black colour. The pulmonary tissue is condensed but still crepitant; the pleura is thickened and opaque, and a distinct tract of black pigment is deposited beneath it. On microscopical examination the walls of the air cells were found to be thickened, and to contain numerous deposits of black pigment dispersed in masses and granules; many cells containing black granules were also found lying loose in the cavity of the air vesicles.

Vide *Path. Soc. Trans.* vol. xx, p. 49.

Presented by Dr. Greenhow, F.R.S.

1276. A portion of Lung, the surface of which is stained with carmine. The surface of the lung is deeply pigmented and partially converted into an extremely dense solid tissue, with a smooth section of a black colour interspersed with whitish spots and streaks formed by thickened capillary bronchial tubes. The walls of the larger bronchial tubes are seen in the section to be thickened. The surface of the lung is puckered and emphysematous. In the left lower lobe there was a cavity containing dark fluid blood.

From a man, aged 38, who had formerly worked as a French millstone maker, but for the last eight years as a stonemason. He had suffered from chronic cough, worse in the winter, for twenty years. About ten weeks before his death he caught cold and was attacked by symptoms of rapid phthisis; diarrhœa supervened, and he ultimately succumbed from an attack of severe hæmoptysis. The ash obtained by incinerating the lung contained much silica.

Reported in *Path. Soc. Trans.*, vol. xvii, p. 24.

Presented by Dr. Greenhow, F.R.S.

1277. A section of the base of the left Lung from the same case, showing the irregular cavity, the thickening of the walls of the large bronchial tubes, and the enlarged pigmented bronchial glands.

Presented by Dr. Greenhow, F.R.S.

1278. A portion of a Lung partly consolidated by yellow exudation into the air cells, the interstitial tissue being deeply pigmented and much thickened and condensed. Near the apex a black solid nodule the size of a pea is visible. The pleural surface of the apex of the lung is covered by a thick mass of fibrous false membrane.

From a stonemason.

Presented by Dr. Greenhow, F.R.S.

1279. A portion of the upper lobe of a Lung, the substance of which is deeply pigmented and its pleural surface covered with false membrane. Some irregular cavities are seen in the lung, and in the neighbourhood of these the pulmonary tissue is consolidated and presents an aggregation of hard black nodules from the size of a hemp seed downward. Near the apex these nodules are intermixed with patches of yellow consolidation resembling yellow tubercle. On microscopical examination the lung was found to be intersected by narrow fibrous tracts studded with black pigment. The walls of the air cells were thickened and crowded with granules and masses of black pigment, and their cavities in places filled with nucleated and amorphous exudation matter. The ash formed by incineration of the lung contained silica, iron, and alumina, the last in larger quantity than was obtained from the specimen of collier's lung; the iron being less.

From a man, aged 35, who had worked as a potter all his life; latterly as a Parian ware maker.

Vide *Path. Soc. Trans.*, vol. xvii, p. 36.

Presented by Dr. Greenhow, F.R.S.

1280. A portion of the lower lobe of the same Lung from the preceding case.

1281. Portions of Lungs deeply pigmented with patches of circumscribed consolidation, produced by yellowish inflammatory exudation into the air cells. On microscopical examination the walls of the air vesicles were found thickened and infiltrated with black pigment, and the pulmonary tissue in the solid portions was intersected by adventitious fibrous bands studded with black pigment granules, and the air vesicles themselves filled with exudation cells and oily granular matter.

The patient was a flax dresser, aged 40, who died from chronic pulmonary disease, produced by the inhalation of the dust.

Vide *Path. Soc. Trans.*, vol. xx, p. 48.

Presented by Dr. Greenhow, F.R.S.

1282. A portion of Lung, deeply pigmented with patches of consolidation, presenting very similar characters to the last specimens.

From a flax dresser, aged 43, who died of chronic pulmonary disease, produced by the inhalation of dust. Vide *Path. Soc. Trans.*, vol. xx. In both these cases an analysis was made of the ash produced by incinerating the lung. In the first case 100 grains of dried lung gave 3·881 grains of ash, of which 0·227 grain was silica.

In the second 100 grains of dried lung gave 2·609 grains of ash, of which 0·47 grain was silica. In both alumina and iron were present.

Presented by Dr. Greenhow, F.R.S.

1283. Portions of Lung, of an almost black colour, and indurated by interstitial fibrous tracts. Chemical examination showed that the lung contained a large quantity of silica, but not more iron than a healthy lung examined for comparison. From a razor grinder.

Vide *Path. Soc. Trans.*, vol.xvi.

Presented by Dr. Greenhow, F.R.S.

1284. A portion of pigmented and indurated Lung, from an iron-worker.

1285. Pigmented and indurated Lung, from a stonemason.

1286. Pigmented and indurated Lung, from a stonemason.

1287. Pigmented and indurated Lung, from an ultramarine-worker.

1288. Pigmented and indurated Lung, from an iron-worker.

1289. Pigmented and indurated Lung (iron-lung), from a looking-glass polisher.

The man died of cancer.

1290. Pigmented and indurated Lung, from a tobacco-worker.

1291. Pigmented and indurated Lung, from an iron-worker.

These specimens were all presented by Dr. Greenhow, F.R.S.

INFARCTUS.

HÆMORRHAGIC INFARCTUS.

1292.

1293.

EMBOLIC INFARCTUS.

1294.

1295.

PYÆMIC INFARCTUS.

1296.

PHTHISIS AND TUBERCLE.

ACUTE TUBERCULOSIS.

1297. A portion of a Lung, completely infiltrated with fine miliary granulations.

1298.

CHRONIC TUBERCULOSIS.

1299. A section of the upper lobe of a left Lung. It is extensively consolidated by yellow infiltration and much pigmented. It contains a large round cavity. The pleura is much thickened and covered by false membrane.

P. M. Reg., vol. iv, No. 1098.

1300.

ACUTE PHTHISIS.

1301.

1302. A portion of a Lung, with the pleura costalis, much thickened, firmly adherent to it. Scattered through every part of the section are small yellow peribronchial granulations, none of which have undergone softening.

CHRONIC PHTHISIS.

1303. The upper and part of the lower lobe of a Lung. The upper lobe is hollowed out into a large ragged tubercular cavity with irregular walls, round which the pulmonary tissue is consolidated by yellowish infiltration. The pleura is covered with false membrance.

From a patient who had cancerous ulceration of the skin of the breast which cicatrized.

1304. A portion of Lung injected. It is extensively consolidated by yellow tubercular infiltration, and contains a large irregular cavity, formed by the coalescence of several smaller ones. The inner wall of the cavity, though very irregular, is lined by nearly smooth membrane. The pleural covering is much thickened.

1305. A portion of Lung, in which several smooth-walled tubercular cavities are seen in section. The pleural wall has been destroyed over a considerable area, whilst the rest of the pleura is thickened. The lung is deeply pigmented, filled with tubercular granulations and cascous nodules; the bronchi are also much thickened.

1306. Portion of Lung, containing a large ragged tubercular cavity, hanging from the walls of which are long shreds of pulmonary tissue. Vessels and tubes still entire cross the cavity in different directions.

1307. 1308.

1309.

FIBROID PHTHISIS.

1310. The apex of a Right Lung, illustrating the changes found in fibroid phthisis. The pleura is enormously thickened; the lung indurated, deeply pigmented, and intersected by dense fibrous tracts, which appear to accompany the bronchi. At one point there is a cavity containing a concretion the size of a pea.

From a man, aged 61, the subject of very chronic phthisis.

Reported, with drawings of the microscopical appearances, in *Path. Soc. Trans.*, vol. xxi, p. 68.

Presented by Dr. Greenhow, F.R.S.

1311.

1312.

TUMOURS OF THE LUNGS AND MEDIASTINA.

SARCOMA.

1313.

1314.

LOCALISED CANCER.

1315. A left Lung, with the mediastinum. Occupying the mediastinum, and surrounding the bifurcation of the trachea, the left bronchus, and the arch of the aorta, is a large lobulated cancerous mass, measuring about five inches in extent from above downwards. The inner surface of the lung is adherent to it throughout its whole extent, but the pulmonary tissue is not invaded. The left bronchus is completely enclosed by the mass; the arch of the aorta passes through it and is much constricted; the left pulmonary artery is also greatly narrowed. The lung is much diminished in bulk and consolidated by grey infiltration. The tumour is in part made up of enlarged bronchial glands. There was great serous effusion into the left pleura. Some of the lumbar glands were infiltrated and cancerous.

From a man, aged 34, who died in the Hospital 27th January, 1855. He had been ill about nine months. While in the Hospital he suffered from cough, dyspnœa, loss of voice, with great debility and emaciation. A systolic bruit was heard along the course of the aorta.
P. M. Reg., vol. ii, No. 272; *Med. Reg.*, vol. i, No. 1034.
For a wax model of the part, *vide* Series XLII, No. 167.

1316. A section of the right Lung and the Trachea. Surrounding the root of the lung is a dense white cancerous mass the size of a goose's egg. It passes for a considerable distance into the substance of the lung, apparently displacing, rather than infiltrating, the pulmonary tissue. The bronchus and the right branch of the pulmonary artery are enveloped and much constricted by the mass. The lung itself is consolidated by grey infiltration, and the pleura much thickened. The left kidney was sacculated, and filled with calculi.

From a women, aged 51, who died in the Hospital 18th November, 1860. She had been ill about eleven months, suffering from cough, spitting, night sweats, and emaciation.
P. M. Reg., vol. iv, No. 1162; *Med. Reg.*, vol. ii, No. 345.

1317. The Heart and Large Vessels, with a portion of a large cancerous growth in the mediastinum, which surrounds the bifurcation of the trachea and compresses the right bronchus, œsophagus, and superior vena cava, the latter vessel being almost completely obstructed.

From a woman, aged 46. The obstruction of the superior vena cava caused œdema of the upper half of the body.
See *P. M. Reg.*, 3rd December, 1860, No. 1171.

1318.

1319.

DISSEMINATED CANCER (Secondary).

1320. A portion of the upper part of each Lung. Disseminated through them are numerous spherical cancerous nodules, varying in size from a walnut to a pea.

From a woman, aged 54, who died in the Hospital 7th March, 1868, of apoplexy, due to a large clot in the right cerebral hemisphere. The liver was studded with cancerous nodules, one of which was of very large size, and was probably the primary cancerous growth. Nodules were also found in the kidney. No cancer was present in the cranium. The patient was excessively fat, and the existence of cancer was not suspected.

P. M. Reg. (*Medical*), vol. viii, No. 157.

1321. A portion of Lung, studded with large cancerous nodules, secondary to cancer of the breast. There was also cancer of the temporal bone.

1322. The lower lobe of a right Lung, thickly studded with spherical cancerous nodules, varying in size from a pea to a walnut.

1323.

1324.

ENTOZOA IN THE LUNGS.

1325. A section of the lower part of a right Lung. It contains a thin-walled cyst, the size of a Tangerine orange, only half of which is preserved. There is no communication with the bronchial tubes. Adherent to its lining membrane are some small calcareous particles. The lung in the immediate neighbourhood of the cyst contained some grey tubercle, but none were found in any other part of the body. The cyst was probably a hydatid.

The patient was a boy, aged 19, who died in the Hospital from typhus fever with pleurisy and pericarditis.

1326.

DISEASES OF THE PULMONARY ARTERIES.

EMBOLISM.

1327.

1328.

THROMBOSIS.

1329.

1330.

COMPRESSION OF THE PULMONARY ARTERIES AND VEINS.

1331.

1332.

Vide Specimens Nos. 1071, 1072, 1080, 1090, 1315, 1316, 1318.

ANEURISM OF THE BRANCHES OF THE PULMONARY ARTERY.

1333.

1334.

SERIES XIX.

INJURIES AND DISEASES OF THE PHARYNX AND ŒSOPHAGUS.

ABNORMALITIES.

1335. A Tongue, Pharnyx, Larynx, and upper part of the Œsophagus. About one and a half inches below the junction of the pharynx the latter tube ends in a blind extremity. The stomach and lower part of the œsophagus were normally developed. The child lived for two days, and attempted to suck; the milk returned through the nostrils.

Vide Specimen No. 1449.

Presented by J. R. A. Douglas, Esq.

1336.

INJURIES OF, AND OPERATIONS UPON THE ŒSOPHAGUS.

RUPTURE AND PERFORATION.

1337.

1338.

IMPACTION OF FOREIGN BODIES.

1339. The Larynx and Pharynx of a male adult. A portion of the vertebra of a pig is impacted between the cricoid cartilage and the wall of the pharynx on the left side; the parts with which it was in contact have sloughed. There was also sloughing of the adjacent connective tissue of the neck. The glottis and epiglottis are very œdematous, and considerably narrow the passage.

The patient bolted the piece in a mouthful of food. He refused to submit to any operation proposed for his relief.

1340.

EFFECTS OF CORROSIVE POISONS.

1341. A Tongue, Larynx, and Œsophagus. The tongue is stained brown. The mucous membrane covering the arytænoid cartilages is somewhat swollen and œdematous. The mucous membrane of the œsophagus is denuded of epithelium, and towards its lower part studded with patches of partially detached membrane, consisting of the altered epithelium.

From a man who swallowed some carbolic acid.

1342. An Œsophagus and Stomach. The mucous membrane throughout is charred and converted into opaque yellow eschars, and is extensively detached. In the stomach the subjacent tissues are blackened and shreddy. The pylorus is contracted, the duodenum normal.

From a case of sulphuric acid poisoning.
Vide Series XX, Nos. 1362–1368, and Series XLIII, No. 15.

ŒSOPHAGOTOMY.

1343.

EFFECTS OF INFLAMMATION.

EFFUSION OF LYMPH.

1344.

DIPHTHERIA.

1345.

ULCERATION.

1346. A Larynx, Trachea, and Œsophagus. A tract of ulceration one and a half inches in length extends round the whole circumference of the upper part of the œsophagus. The ulcerated surface is pigmented, cicatrised, and presents villous outgrowths; a little to the right of the middle line is an oval perforation into the trachea an inch in length.

Presented by R. Cartwright, Esq.

1347. The lower part of an Œsophagus and the arch of the Aorta. About three inches above the cardiac orifice, on the left side, is a circular perforation in the œsophagus three and a half lines in diameter, with somewhat elevated sharply cut edges; this leads into a cavity in the loose connective tissue between the aorta and the œsophagus, and communicates with the former at the termination of the descending part of the arch by an irregular ragged opening one and a half lines in width, round which for a space of three lines the coats of the aorta are thinned.

From a man, aged 51, who was suddenly seized with profuse hæmorrhage from the mouth whilst at work. The next morning a second attack occurred which was fatal. For about a week previously he had suffered from a deep-seated pain at the top of the sternum.
Reported in *Med. and Chir. Trans.*, vol. xxxvi, p. 353.

SYPHILITIC ULCERATION.

1348.

SIMPLE STRICTURE.

1349. A Larynx, Pharynx, and upper part of the Œsophagus. At the junction of the pharynx and œsophagus there is a stricture about half an inch in length, the diameter of the tube being reduced to about a quarter of an inch. The muscular walls of the constricted part are thickened and the mucous membrane denuded of its epithelium.

Vide Specimen No. 1335.

1350. A portion of an Œsophagus. The whole tube is constricted and puckered for a space of about two inches, as if from the contraction of a cicatrix. The mucous membrane has been destroyed by ulceration, and the muscular coat is thickened.

MORBID GROWTHS, &c.

CANCER.

1351. The upper part of a Trachea, Pharynx, and Œsophagus. The mucous membrane of the right side of the pharynx and the upper part of the trachea is extensively ulcerated, and the surface here presents a ragged villous outgrowth of cancer. Both lungs in this case contained numerous deposits of miliary tubercle.

From a man, aged 60, who died in the Hospital 3rd October, 1862; he was suffering from pleurisy caused by fractured ribs.
Med. Reg., vol. ix, 382; *P. M. Reg.*, vol. v, 1506.

1351A. The anterior wall of a Pharynx, extensively destroyed by cancerous ulceration. The right arytænoid cartilage with the arytæno-epiglottidean folds have quite disappeared, the left cartilage is much necrosed, a considerable portion of the cricoid cartilage is also necrosed and loose. The right superior laryngeal nerve is exposed on the floor of the ulcer, and is thickened and infiltrated. Near the lower part of the ulcer is seen a cancerous nodule the size of a hazel nut. On microscopical examination the disease presented the characters of epithelioma.

From a man, aged 63, who died after an illness of five weeks' duration. He suffered from inability to swallow solid food, and attacks of spasmodic dyspnœa.
Reported in *Path. Soc. Trans.*, vol. xii, p. 104.

Presented by Dr. Hall Davis.

1351B. A Larynx and Pharynx. Occupying the right side of the pharynx is a large epitheliomatous ulcer with elevated ragged edges; it has destroyed the right arytæno-epiglottidean fold, and laid bare part of the cricoid cartilage, and the right ala of the thyroid. There was extensive cancerous infiltration of the lymphatic glands, and on the right side these formed a mass in which the right vagus nerve was embedded for two inches. The mucous membrane of the stomach has undergone post mortem digestion. *Vide* No. 1385.

From a man, aged 44, who died suddenly in the Hospital 18th October, 1856; he had suffered from dyspnœa and disphagia for six months.
Reported in *Path. Soc. Trans.*, vol. viii, p. 176.

1352. An Œsophagus with the bifurcation of the Trachea. The mucous surface of the middle of the œsophagus for a space of about two and a half inches is ulcerated and covered with cancerous outgrowths. The muscular walls are here greatly hypertrophied, and the calibre of the tube much diminished; a perforation is seen in the anterior wall close to the left bronchus; it led into a cavity in the left lung.

1353. A Larynx, Trachea, and Œsophagus. The œsophagus is much dilated, and for a length of six inches its whole circumference is occupied by a cancerous ulcer with thickened ragged edges. About the centre of this is a perforation admitting a No. 10 catheter into the trachea close to its bifurcation. The glands along the lower part of the trachea and the bronchi are much enlarged and infiltrated. A cancerous nodule projects into the right bronchus.

1354. An Œsophagus. One and a half inches above the cardiac orifice of the stomach its calibre is greatly narrowed for a length of half an inch. A hard tumour the size of half a walnut is firmly attached to the constricted portion and forms part of its posterior wall. A sinus leads from the mucous surface of the œsophagus into this tumour which at its upper part was non-adherent to the œsophagus. On microscopical examination the tumour was found to present the characters of cancer. Both old and recent tubercles were found in the lungs.

From a man, aged 54, who died in the Hospital 7th September, 1863, after an illness of about three months

Vide *Path. Soc. Trans.*, vol. xv, p. 102.

1355. An Œsophagus and Stomach laid open. The walls of the œsophagus for a length of about four inches, beginning at the cardiac orifice, are much thickened by cancerous infiltration, forming nodulated growths projecting internally. The cardiac orifice itself is almost obstructed by cancerous outgrowths into its canal. The œsophagus is much dilated, and the mucous surface of the infiltrated part is ragged and ulcerated. The glands in the lesser curvature of the stomach are enlarged from cancerous infiltration.

From a man, aged 56, who died in the Hospital 3rd February, 1856. He had suffered from symptoms of stricture of the œsophagus for six months. There was tubercular consolidation and excavation of the lungs.

P. M. Reg., vol. ii, No. 413; *Med. Reg.*, vol. ii, No. 559.

1356. The lower part of an Œsophagus and the cardiac orifice of the Stomach. Attached to the posterior wall of the œsophagus, immediately above its termination, and projecting into its cavity, is a lobulated tumour the size of a hen's egg, in part ulcerated and broken down. The œsophagus above the tumour is much dilated. There was cancerous stricture of the pylorus and obsolete tubercle in the lungs.

From a man, aged 56, who died in the Hospital 8th November, 1863; he had been ill for about five months, with pain over lower part of sternum after food, and vomiting.

Med. Reg., vol. x, No. 341; *P. M. Reg.*, vol. v, No. 1686.

1357. A lobulated Tumour from the Pharynx.

Removed by Mr. Rix.

OTHER MORBID GROWTHS IN AND AROUND THE ŒSOPHAGUS.

PERFORATION OF THE ŒSOPHAGUS BY ABSCESS, ANEURISM, ETC.

1358.

Vide Series XIV, No. 1084.

DILATATION.

1359.

Vide Nos. 1349, 1350.

POST MORTEM DIGESTION.

1360.

SERIES XX.

INJURIES AND DISEASES OF THE STOMACH.

ABNORMALITIES.

1361. A Stomach and Duodenum from a new-born child. Just above the entrance of the bile duct the duodenum ends blindly, but the lumen of the bowel is immediately restored, though much smaller than the part above the point of obliteration. The common bile duct opens into the lower portion. The child lived three days.

Reported in *Med. Chir. Trans.*, vol. lxvii.

Presented by J. B. Sutton, Esq.

INJURIES AND OPERATIONS UPON THE STOMACH.

RUPTURE.

1362. The Stomach of a boy aged 7 years. Running obliquely across the larger curvature is a gaping rupture four inches in length, with the mucous surface everted. The injury was caused by a fall from a ladder. The patient survived a few hours.

Surg. Reg. 1869, No. 451.

EFFECTS OF POISON.

1363. A Stomach and Œsophagus. The stomach is contracted, and the mucous membrane of the lower part of the œsophagus, the lesser curvature, and the pyloric end of the stomach, are extensively eroded, leaving ulcerated patches which are apparently commencing to cicatrise.

From a man, aged 31, who died in the Hospital March, 1853, forty days after swallowing about two ounces of strong nitric acid diluted in a tumbler of water.

1364. An Œsophagus and Stomach, the inner coats of which are in part converted into opaque yellow and black eschars, and in part reduced to a shreddy, pulpy condition. At the most depending part of the stomach is a large ragged perforation with pulpy margins, which allowed the contents to escape into the peritoneal cavity.

From a woman, aged 30, who died in the Hospital 4th June, 1861, six hours after swallowing purposely two or three ounces of strong nitric acid.
P. M. Reg., vol. iv, No. 1285.

1365. A dilated Stomach. The whole of the mucous membrane is converted into a brownish eschar, in parts black from extravasation, and rendered villous by projecting filaments, the muscular and peritoneal coats appear to be entire.

From a man, who died in the Hospital 11th September, 1866, with symptoms of irritant poisoning, about eight hours after swallowing a pint of hydrochloric acid.

1366. A Stomach. The mucous membrane is stained brown, opaque, and thrown into folds, the convexities of which are in places covered with granular brown patches. There is no ulceration.

From a case of carbolic acid poisoning.

1367. The pyloric end of a Stomach. For a space of about one and a half inches the tube is constricted to a calibre of about half an inch in circumference; corresponding to this the muscular coat is greatly thickened, and a short distance from the pylorus the mucous surface presents an opaque white cicatrix. The œsophagus and rest of the stomach were normal.

From a woman, aged 30, who on 25th June, 1860, swallowed by mistake about two table-spoonfuls of somewhat diluted sulphuric acid. She was at once seized with violent pain and retching, and vomited bloody matter. She was admitted into the Hospital, and was discharged convalescent on 24th July. Shortly after she began to suffer from severe epigastric pain, and could keep nothing on her stomach. She was re-admitted 28th August, and died from exhaustion 2nd October.

Med. Reg., vol. vii, Nos. 215 and 285; *P. M. Reg.*, vol. iv, No. 1139.

Vide Series XIX, No. 1342.

1368.

GASTROSTOMY.

1369.

1370.

DISEASES OF THE STOMACH.

HÆMORRHAGIC EROSION.

1371.

ABNORMAL CONDITIONS OF THE MUCOUS MEMBRANE OF THE STOMACH.

1372. A Stomach, laid open, showing the condition known as "Mammillation of the Mucous Membrane." There are also some very small follicular ulcers.

CONTRACTION AND THICKENING OF STOMACH.

1373.

ULCERS.

1374. The cardiac orifice of a Stomach. Half an inch below the termination of the œsophagus is seen a minute ulcer one and a half lines in diameter, which perforates a large branch of the gastric artery. The surrounding mucous membrane is healthy.

From a soldier, ag d 28, who died in the Hospital 15th November, 1869. He was of intemperate habits, and affected with constitutional syphilis. In March, 1869, after severe straining in lifting heavy weights, he was seized with profuse hæmatemesis, which lasted two days. This recurred 10th November, and continued till death. He presented no other symptoms of gastric disease, as pain after food, or vomiting. The liver was cirrhotic.

Vide *Path. Soc. Trans.*, vol. xxi, p. 164.

Presented by Dr. Murchison, F.R.S.

1375. A portion of the cardiac end of a Stomach. In the centre a small patch of the mucous membrane, measuring four lines by two lines, is yellow, opaque, and defined at its margins by a slightly depressed dark line. The recent appearances were those of an incipient slough. In the centre of this patch is a perforation leading into an artery of the diameter of a stocking needle. Two

small hæmorrhagic erosions were situated in the neighbourhood, otherwise the stomach was normal.

The patient was a gin-drinking woman, aged 50, who died in the Hospital 20th June, 1869. For twelve months she had suffered from nausea and loss of appetite, but not from vomiting. On 15th June she was attacked by profuse hæmatemesis, which by its recurrence proved fatal. The liver was healthy.

Vide *Path. Soc. Trans.*, vol. xxi, p. 162.

1376. A portion of a Stomach, showing a circular ulcer with raised thickened edges, the size of a crown piece. It has perforated as far as the peritoneum, which is thinned and pulpy; the surrounding mucous membrane appears to have undergone post mortem digestion.

1377. A greatly dilated Stomach, showing a very large simple ulcer situated on the posterior wall, and another smaller ulcer at the edge of the large one. The base of the former is formed in part by the pancreas.

1378. A portion of a Stomach, presenting a deep conical ulcer about one inch in diameter, with thickened margins. The floor of the ulcer is perforated by a large oval opening; the peritoneal surface for some distance around is covered with a layer of yellow lymph.

1379. A portion of a Stomach. On the lesser curvature is a deep circular ulcer, the size of a sixpenny piece. For some distance round the coats are much thickened, puckered, and the rugæ of the mucous membrane obliterated. The floor of the ulcer is formed in part by the pancreas, beyond which is a small circular perforation, with sharp edges produced by sloughing.

From a woman, who did not complain of illness until thirty hours before death.

1380. A portion of the posterior wall of a Stomach. In its centre is an elliptical ulcer one and a quarter inches long by three quarters of an inch broad; the edge is somewhat thickened, and at the lower part is smoothed down and puckered; here the ulcer is cicatrising. The floor of the ulcer is formed by the peritoneal coat, and in the centre is a circular aperture with thin sharp edges, produced by the separation of a slough. The anterior part of the stomach in which the ulcer is situated was closely but not firmly adherent to the under surface of the liver.

The patient, a female, aged 19, died in the Hospital of peritonitis caused by the perforation.

1381. A Stomach and Pancreas. Of the lesser curvature and posterior surface is a circular ulcer two inches in diameter; this has eaten through the coats of the stomach, and its floor is formed by the exposed pancreas; beyond the edge of this gland the ulcer has perforated the peritoneal coat by two irregular rents.

1382.

CICATRISATION OF ULCERS.

1383.

GASTRIC AND OTHER FISTULÆ INVOLVING THE STOMACH.

1384. A portion of a Stomach, Liver, and Colon, with part of the Abdominal Wall. Immediately above the umbilicus is an oval opening in the abdominal wall measuring three inches in its long diameter, communicating with a large

circumscribed cavity, bounded by the liver, colon, and stomach. The colon at the hepatic flexure opens into it by a large ulcerated opening which involves half the calibre of the bowel. There is also an extensive communication between this cavity and the stomach.

The patient, a woman, aged 33, after a difficult labour noticed a painful swelling near the umbilicus; this burst at the end of eight months, and discharged fæcal matter. After her admission into the Hospital the resulting fistulous opening was enlarged, and from this time food used to escape through it immediately after eating. She died ten months after the first appearance of the swelling.

Surg. Reg., 1867, No. 345.

POST-MORTEM DIGESTION.

1385. A portion of the cardiac end of a Stomach. In the lower half the mucous membrane is unaltered, in the upper half it is entirely dissolved away, and the subjacent coats are softened and thinned, the result of post-mortem digestion. In this case the right vagus nerve was destroyed by cancerous infiltration.

Vide Specimen No. 1351B.

MORBID GROWTHS.

POLYPUS.

1386.

SARCOMA.

1387. A Stomach, which is dilated. Except near the cardiac and pyloric orifices, almost the whole of the inner surface of the stomach presents a lobulated outgrowth of soft cancerous looking tissue, the mucous membrane over which is extensively ulcerated. The whole mass forms a large solid tumour which weighed thirty-five ounces. During life it appeared to form one mass with the spleen, which was adherent to the stomach.

From a man, aged 57, who died 24th November, 1868. He had been ill since February, but while in the Hospital, beyond loss of appetite and flatulence, presented no symptoms referable to the stomach. He was very anæmic, cachectic, and died at last of diarrhœa and peritonitis. There were no secondary deposits. On microscopical examination the morbid growth was found to be composed of round, oval, and somewhat granular corpuscles, apparently having the character of nuclei. These were embedded in a granular intercellular substance without any alveolar arrangement. The tumour exuded no juice on section. It must therefore be classed with the sarcomata.

Reported by Dr. Cayley in *Path. Soc. Trans.*, vol. xx, p. 170.

CANCER.

1388. A portion of a Stomach. The mucous membrane presents several large circular ulcers with raised undermined edges; of these there were originally five. Adherent to the stomach in the lesser omentum is a large soft vascular mass of medullary cancer. The margins of the gastric ulcers were found on microscopical examination to be infiltrated with cells much resembling white blood globules, and resembling in every respect those of which the other deposits were composed.

From a boy, aged 15, who died in the Hospital 27th August, 1861, after an illness of two months' duration, of cancer, primarily of the inferior maxilla. The disease in the upper jaw appeared after the extraction of a tooth. There were multiple secondary deposits in the subcutaneous areolar tissue, the bones, lung, omentum, mesentery, &c.

Surg. Reg., vol. viii, No. 358; *P. M. Reg.*, vol. iv, No. 1325.

Presented by Dr. Murchison, F.R.S.

1389. A Stomach, which is much dilated. A nodulated tumour of soft cancer three inches in diameter projects from its anterior wall into the interior at the junction of the middle and pyloric third. Between this and the œsophagus the mucous membrane is greatly thickened by cancerous infiltration, and within an inch of the œsophageal opening a cancerous mass has become gangrenous, and hangs down in the form of loose shreds into the cavity of the stomach.

From a man, aged 45, who died in the Hospital 14th January, 1868. He was very cachectic, and suffered from paroxysms of acute pain in the left hypochondrium and loin, which were apparently caused by a mass of enlarged glands pressing upon the lumbar nerves, but he did not suffer from pain after food or vomiting. His death was caused by profuse hæmorrhage from the stomach and bowels, produced by the sloughing laying open a vessel of considerable size. Apart from the lumbar and œsophageal glands, there were no secondary deposits in the viscera.

Reported by Dr. Murchison in *Path. Soc. Trans.*, vol. xix, p. 211.

1390. A Stomach and the lower end of the Œsophagus. A great part of the mucous surface of the cardiac and middle portion of the stomach is covered with soft lobular masses of medullary cancer. Over a large space the infiltrated mucous membrane appears to have been dissolved by the action of the gastric juice, leaving shreddy masses hanging from the submucous tissues.

1391. The pyloric end of a Stomach. The coats in the neighbourhood of the pylorus for about one inch on its cardiac side are infiltrated with a hard cancerous growth, which projects on the mucous surface in the form of rounded excrescences. The pyloric canal is constricted to the calibre of a No. 12 catheter, and is so tortuous that fluids did not pass by their own weight. On the surface of the section the muscular coat is seen to be puckered as if by cicatricial contraction, and appears hypertrophied.

From a woman, aged 43, who died in the Hospital 9th July, 1861. She was a hard spirit drinker, and had suffered from constant vomiting, sometimes of altered blood, for six weeks. She also had attacks of convulsions. There was incompetency of the aortic valves and granular disease of the kidneys. There were secondary cancerous deposits in the glands near the lesser curvature of the stomach, but not in the viscera.

P. M. Reg., vol. iv, No. 1302; *Med. Reg.*, vol. viii, No. 218.

1392. The pyloric end of a Stomach, the coats of which are much thickened, partly by considerable hypertrophy of the muscular layer, and partly by cancerous infiltration of the submucous and subserous layers, which form a dense white tissue with uniting bands which pass through the muscular coat. Several superficial erosions are visible in the mucous membrane. A microscopical examination was made of this preparation in 1870, after it had been many years in spirit. The dense white submucous tissue presented collections of nucleated cells enclosed in the alveolæ of a fibrous meshwork.

1393. The pyloric half of a Stomach. Near the pylorus the coats of the stomach are greatly thickened; this is chiefly due to cancerous infiltration of the mucous and submucous tissues. The muscular coat is hypertrophied and intersected by tracts continous with the submucous infiltration on the one hand, and with similar infiltration of the subserous tissue on the other. The mucous surface presents a large irregular tract of ulceration. There were deposits of medullary cancer in the liver.

From a man, aged 50, who died in the Hospital 14th January, 1855, after an illness of about six months' duration. He suffered from constant epigastric pain and vomiting.

Med. Reg., vol. ii, No. 7; *P. M. Reg.*, vol. ii, No. 266.

COLLOID CANCER.

1394. A Stomach, which is much contracted. The mucous membrane is thickened, and appears to have undergone a uniform infiltration with colloid

cancer. The section shows it to consist of minute semi-transparent lobules, separated by white lines of fibrous tissue. The muscular coat is thickened, and appears also to be in part infiltrated. The serous coat is thickened and opaque.

From a man, aged 40, who died in the Hospital 20th May, 1854. He had suffered from vomiting for six months. There was chronic peritonitis with miliary tubercles scattered over the serous surfaces, and tubercular deposits in the lungs.

P. M. Reg., vol. ii, No. 179 ; *Med. Reg.*, vol. i, No. 553.

1395. A Stomach, all the coats of which over the pyloric end are greatly thickened by infiltration of colloid cancer. This affects the mucous, muscular, and serous coats, though the distinction between them is still preserved. The disease ends abruptly at the pyloric orifice, and also on a line with the cardiac orifice. The coats at the fundus are thinned and softened, and the blood in the vessels blackened from the effects of self-digestion.

Presented by Dr. Brinton.

SERIES XXI.

INJURIES AND DISEASES OF THE INTESTINES, PERITONEUM, OMENTUM, AND MESENTERY.

ABNORMALITIES.

1396. A coil of the Ileum, dried. Projecting from it close to its attached border is a diverticulum the size of a bantam's egg. Immediately beyond this a valve like process projects into the cavity of the intestine.

1397. A coil of the Ileum, dried. Projecting from it is a Meckel's diverticulum three inches long, and of about half the calibre of the intestine; it is slightly hollow at the end. It springs from the intestine between its attached and free borders, and is situated two feet from the cæcum. It is furnished with a partial mesentery.

From a man, aged 35, who died of tuberculosis of the pia mater, lungs, and intestines.
P. M. Reg., vol. ii, No. 463.

1398. A portion of the Ileum, dried, presenting a Meckel's diverticulum springing from the free border one and a half inches in length.

1399. A portion of the Ileum, with a diverticulum four and a half inches in length, distended and dried. The diverticulum is about equal in size to the little finger, and its distal end is bulbous. It lay upon the upper surface of the liver, which was grooved by it.

P. M. Reg., 1875, No. 256; *Journal of Anat. and Phys.*, 1876, vol. x, p. 617.
Presented by Dr. Sidney Coupland.

1400. A portion of Small Intestine, dried, presenting a diverticulum furnished with a partial mesentery three and a half inches in length.

Vide Specimen No. 1401.

1401. The commencement of the Colon, dried. The caput cæcum is extended in the form of a somewhat conical prolongation for a distance of three and a half inches beyond the entrance of the ileum. This projection is surmounted by the vermiform appendix.

From the same case as the preceding preparation. The patient was a man, aged 64, who died in the Hospital 27th October, 1856, of cerebral hæmorrhage.
P. M. Reg., vol. iii, No. 573.

1402. A Rectum, which is greatly dilated. It terminates in a blind extremity about an inch from the anal orifice, which with the last half inch of the bowel is normally formed. The two cul-de-sacs are united by an imperforate fibrous band.

1403. The lower portion of a Rectum, with a portion of the wall of the Bladder. The former, which is dilated, terminates in the bladder by a small orifice, through which a glass rod is introduced.

1404. The Rectum and Anus of a male child 12 days old. The rectum, which is much dilated, terminated blindly one and a quarter inches above the anus. The anus itself and the bowel half an inch above are normally formed. An artificial opening, through which a bristle is passed, leads from the anal cul-de-sac directly behind the prostate and bladder into the termination of the dilated rectum.

The child was brought to the Hospital November, 1858, when 4 days old. Nothing could be felt of the rectum; a trocar was passed by Mr. Flower upwards and backwards, directly in the middle line, and soon reached the intestine. After this the fæces passed freely; a bougie was introduced occasionally. The child died on the eighth day after the operation, apparently from exhaustion, but on post-mortem examination signs of slight peritonitis were discovered.

INJURIES OF AND OPERATIONS UPON THE VARIOUS STRUCTURES.

1405. Parts from a case of left Lumar Colotomy. The mucous membrane of the descending colon projects considerably from the wound. The operation was performed to relieve obstruction of the bowel caused by a tumour in the pelvis.

The patient, a female, died seven days afterwards.
See *Female Surg. Reg.*, vol. i, No. 90; and *Med. Times and Gazette*, 24th December, 1853.

1406. A large slough of a portion of the Rectum, from a case in which nutrient enemata had been frequently administered.

Presented by Henry Morris, Esq.

EFFECTS OF POISONS.

1407.

FÆCAL AND RECTO-VESICAL FISTULÆ.

1408. 1409.

1410.

ABSCESSES OPENING INTO THE INTESTINE.

1411.

PROLAPSUS ANI.

1412. The Anus, showing a prolapse, which presents the form of a thick fleshy ring.

Presented by R. Cartwright, Esq.

DISEASES OF THE INTESTINES.

DILATATION.

1413. A portion of the upper part of the Ileum. The bowel is constricted by a valve-like projection into its interior, corresponding to which is a puckered cicatrix on the serous surface. Above the stricture the bowel is dilated, and presents close to it a small perforation.

From a man, aged 57, who was admitted into the Hospital 31st January, 1867, moribund from acute peritonitis. Some years previously he had been operated upon for strangulated hernia, and it is most probable that the bowel was wounded, and that the stricture was produced by the resulting cicatrix.

HYPERTROPHY OF THE MUSCULAR COAT.

1414.

ABNORMAL CONDITIONS OF THE MUCOUS MEMBRANE.

1415. A portion of the Ileum, with the Cæcum and Appendix, from a case of Addison's disease, showing considerable enlargement of the solitary and agminate glands.

1416. A portion of Duodenum. The mucous membrane, especially that of the valvulæ conniventes, is covered by a granular deposit, a result of inflammation.

Presented by F. Samwell, Esq.

CHANGES IN SCARLET FEVER.

1417. The lower part of the Ileum. Peyer's patches and the solitary glands are much swollen, and in the recent state there was intense congestion of the lower third of the small, and of all the large intestines, including the glands.

From a man, aged 21, who died in the Hospital, 19th October, 1858, from scarlatina, on the nineteenth day of the disease.

P. M. Reg., vol. iii, No 875; *Med. Reg.*, vol. v, No. 450.

1418. A portion of Ileum. The villi are very conspicuous, and Peyer's patches and the solitary glands much swollen; the former in the recent state showed commencing ulceration, and the mucous membrane was intensely congested. These changes were found throughout the whole course of the small intestine. There were also ecchymoses of the stomach, and the fauces were inflamed.

From a man, aged 19, who died in the Hospital, 18th February, 1863, of malignant scarlatina, after an illness of forty-eight hours. The eruption was suppressed, and he had diarrhœa. Two of his children were suffering from scarlatina at the same time.

P. M. Reg., vol. v, No. 1552.

1419. Another portion of the Small Intestine from the same case as the preceding, showing similar changes; the mucous membrane has retained its colour.

1420. The lower part of the Ileum and Cæcum. The villi are very conspicuous, and the solitary glands much enlarged and very prominent; some are almost pedunculated. The mucous membrane was extensively congested.

From a case of scarlatina.

CHANGES IN TYPHUS.

1421. The lower part of the Ileum. The solitary glands appear somewhat enlarged, and close to the valve are two slender polypoid growths. Peyer's patches do not appear to be altered.

From a man, aged 44, who died of typhus on the 18th day of the disease. The disease was attended throughout by diarrhœa.

Presented by Dr. Murchison, F.R.S.

1422. A portion of Small Intestine. The mucous membrane is congested, and covered with patches of partially detached fibrinous false membrane. Peyer's patches and the solitary glands are not affected.

From a case of typhus.

1423. The Cæcum and Colon from the same case as the preceding. The mucous membrane is intensely congested, and presents large raised patches. The solitary glands are greatly enlarged, many of them opaque and yellow, some have sloughs in their centres. Numerous irregular ulcers produced by sloughing are visible, especially in the first part of the colon.

CHANGES IN CHOLERA.

1424. Two portions of Small Intestine, each presenting one of Peyer's patches, which is much swollen and raised above the surface. The separate glands in each patch are much enlarged, and many present depressions in their centres. The solitary glands are also much enlarged.

From a girl, aged 7, who died in the Hospital, 9th November, 1853, of Asiatic cholera, after an illness of fourteen hours' duration.

P. M. Reg., vol. i, No. 88; *Med. Reg.*, vol. i, No. 278.

CHANGES IN RINDERPEST (Cattle Plague).

1425. A portion of the Small Intestine of an animal which died about the eighth day after disease. It shows a Peyer's patch much less prominent and raised than occurs in the healthy animal, but free from ulceration. The single enlarged gland is constantly found in healthy animals.

Presented by Dr. Murchison, F.R.S.

1425A. A similar specimen, from a bullock.

Presented by Dr. Burdon Sanderson, F.R.S.

ULCERATION OF THE INTESTINE.

FOLLICULAR AND SIMPLE ULCERATION.

1426. A portion of the Duodenum, with the termination of the common Bile Duct. The mucous membrane round the entrance of the common bile duct presents an irregular tract of ulceration two and a-half inches in long diameter. Its surface is covered by short branched villous outgrowths. The termination of the duct is obstructed, and the part behind enormously dilated.

PERFORATING ULCERS.

1427. A portion of a Stomach, Duodenum, and Pancreas. In the duodenum, close to the pyloric valve, is an oval opening, two inches in length and three-quarters of an inch in width, with the mucous membrane at its edges everted. In the recent state this was closed by the pancreas, which is now turned back.

From a woman, aged 30, who was admitted 10th May, 1854, for a large ovarian cyst, and died 10th June. While in the Hospital she had severe epigastric pain and profuse hæmatemesis.

P. M. Reg., vol. ii, No. 186; *Med. Reg.*, vol. i, 565.

1428. The Pylorus and first part of the Duodenum. Close to the pyloric valve is an irregularly circular ulcer, with raised puckered edges, the size of a crown piece. All the coats of the bowel have been eaten away, and the floor of the ulcer is formed by the pancreas. An artery of considerable size crossing it is laid open for the space of a quarter of an inch; other smaller arteries with plugged orifices are seen to form little prominences.

From a man, aged 49, who died in the Hospital 20th May, 1868. For two years previously he had been liable to repeated attacks of hæmatemesis, and had suffered from constant pain below the right ribs. He died with rapid development of tubercle in his lungs.

Reported by Dr. Murchison in *Path. Soc. Trans.*, vol. xx, p. 174.

1429. A portion of a Stomach and the Duodenum. Close to the pylorus is a large circular ulcer in the duodenum, which in part appears to have cicatrised. At one point there is a small perforation.

From a man, aged 30, who had long suffered from symptoms of dyspepsia; he was suddenly seized with acute peritonitis, and died in twenty-five hours.
Med. Reg. for 1868, No. 93.

1430. A portion of a Rectum, everted. At one point an oval perforated ulcer is seen, about one inch in long diameter. The margins of the perforations are thin and pulpy.

From a woman, who died in the Hospital 24th September, 1852; she had ascites, and peritonitis, and passed pus with her motions.

ULCERATION ASSOCIATED WITH BURNS AND SCALDS.

1431.

1432.

ULCERATION FROM FÆCAL ACCUMULATION.

1433.

1434.

DYSENTERY.

1435. A portion of Small Intestine from a case of dysentery. The valvulæ conniventes are covered by patches of granular lymph, a stage anterior to ulceration.

1436. A portion of the Colon. The mucous surface is everywhere studded by deep follicular ulcers, which in many places have coalesced so as to cause extensive destruction of the mucous membrane. The disease was probably due to dysentery.

1437. A portion of the Colon, inverted. The mucous membrane is intensely congested, and presents several long narrow partially detached transverse sloughs. The disease was probably of dysenteric origin.

1438. Two portions of the Colon. The whole bowel is intensely congested; the mucous membrane extensively destroyed by irregular tracts of ulceration, in many places extending into the muscular coat, which is much softened and easily torn. The portions of mucous membrane which remain are infiltrated, partially detached, and present long flocculent sloughs hanging down from them.

From a Prussian soldier, who died of acute dysentery at Sedan, October, 1870.
Path. Soc. Trans., vol. xxii.
Presented by Dr. John Murray.

1439. A similar specimen to the last, also from a Prussian soldier at Sedan.
Presented by Dr. John Murray.

1440. The ascending Colon and termination of the Ileum. The mucous membrane is extensively destroyed by irregular tracts of ulceration. The intermediate portions are swollen, and present long branched villous processes hanging from them. From a patient who is stated to have died of dysentery. The ileum is unaffected.

1441. A portion of the Colon. The mucous membrane is extensively destroyed by transverse tracts of ulceration passing round the intestine between the folds. The folds themselves are swollen and softened, and give off long flocculent branched villous processes.

From a man, aged 47, who died in the Hospital of dysentery, 6th December, 1855. He had suffered for about three months from diarrhœa with bloody stools; it began as an acute attack.

P.M. Reg., vol. ii, No. 416; *Med. Reg.*, vol. ii, No. 506.

1442. Two portions of the Colon. The mucous membrane is destroyed by ulceration over a great part of the specimen, and the remainder forms villous tufts which thickly stud the surface. Some are in the form of velvety patches, others as long branched flocculent processes. The lower part of one portion is free from ulceration, but here the entire mucous membrane is thickened and velvety.

From a man, aged 50, who died in the Hospital 20th February, 1855. On 2nd September, 1854, he was attacked during the epidemic by Asiatic cholera; his wife was also attacked and died. He was admitted in a state of collapse; his motions presented the ordinary character of cholera stools, but also contained much blood. He recovered from the cholera, but continued to suffer from diarrhœa and bloody motions, and died exhausted after six months.

Path. Soc. Trans., vol. vii.

1443. A portion of Large Intestine. The mucous membrane is thickly studded with outgrowths, some forming simple rounded elevations, others stalked processes varying in length from a quarter to one inch, with club-shaped ends. In many places the ends are branched, and in some those of neighbouring ones are united together so as to form an irregular meshwork. They extend from above a cicatrix which was situated three inches from the anus to within a short distance of the ileo-cæcal valve.

From a man, aged 46, who died in the Hospital March, 1863. He had a phagedæmic ulcer of the foot, and suffered from diarrhœa and hæmorrhage from the bowels for three years.

1444. A portion of the Sigmoid Flexure of the Colon from the same case as the preceding specimen.

ENTERIC FEVER IN ANIMALS.

1445. A portion of the Colon, laid open, showing numerous ulcerated Peyer's patches. From a Lemur, which contracted typhoid fever at the Zoological Gardens, Regent's Park. In many animals the agminate glands are found in the greater part of the large intestine, and in some to the end of the rectum.

Presented by J. B. Sutton, Esq.

1445A. The Rectum, from the preceding case, showing a ring of ulceration at the junction of the anus and rectum.

Vide *Path. Soc. Trans.*, vol. xxxv.

Presented by J. B. Sutton, Esq.

ENTERIC FEVER IN MAN.

1446. The termination of the Ileum and part of the Cæcum of a child. The solitary glands are greatly enlarged, each presenting a minute orifice in its centre. Immediately above the ileo-cæcal valve is seen part of a Peyer's patch swollen and infiltrated, but with its glandulæ distinct so as to form a "plaque molle" of Louis.

1447. A portion of the Ileum. Peyer's patches and the solitary glands present characters closely resembling those of the preceding specimen.

From a girl, aged 16, who died in the Hospital, about the eighteenth day of the disease.

Med. Reg., vol. ii, No. 520; *P. M. Reg.*, vol. ii, No. 391.

1448. A portion of the Ileum of a child. Two of Peyer's patches are seen to be much swollen and raised. Their surfaces are rugose and reticulated from the infiltration, affecting chiefly the glandulæ. "Plaque molle."

1449. The termination of the Ileum. A Peyer's patch is seen infiltrated, elevated, and rugose; its surface is rough from the formation of minute partially detached sloughs. The solitary glands are enlarged and punctated.

1450. The lower three feet of the Ileum. The whole mucous surface is intensely congested. In the last one and a half feet loose ragged sloughs are seen hanging from the enlarged and infiltrated Peyer's patches and solitary glands. From the latter the sloughs have in many cases become completely detached, leaving round ulcers with elevated margins. In the upper one and a half feet Peyer's patches are occupied by firm brown sloughs, which show a line of ulceration between them and the elevated margins of the patch.

From a patient, aged 32, who died in the London Fever Hospital 3rd September, 1864, on the twenty-fifth day of the disease.

Presented by Dr. Murchison, F.R.S.

1451. The lower part of the Ileum and Cæcum. In the ileum Peyer's patches are greatly enlarged, with raised edges, and are occupied by thick brown sloughs. The solitary glands are similarly affected. The cæcum is normal.

1452. A portion of the lower part of the Ileum. Peyer's patches are much enlarged and swollen by infiltration, and raised above the surface of the intestine. Their margins and a considerable part of their surface is smooth, from the infiltration affecting all the tissues of the patch uniformly and not only the glandulæ, so as to constitute the "plaque duré" of Louis. The centres, however, are still somewhat reticulated and rugose. The solitary glands are also much swollen.

From a woman, who died in the Hospital 29th September, 1870, on the thirteenth day of the fever.

1453. The termination of the Ileum and commencement of the Colon. Peyer's patches on and about the ileo-cæcal valve are much swollen and elevated by infiltration; their surfaces are rugose. The solitary glandulæ in the colon are somewhat enlarged. The mesenteric glands are much swollen.

1454. A portion of the Ileum. In the upper part is a circular perforation the size of a shilling, produced by the sloughing out of an entire Peyer's patch with the subjacent intestinal wall. The perforation is bounded by infiltrated mucous membrane, except one side, where a narrow tract of ulceration intervenes. The peritoneal surface is covered with recent lymph. Below is seen an ulcerated Peyer's patch, the centre of which is occupied by a still adherent brownish-black slough.

From a man, aged 36, who died in the Hospital 18th August, 1858, on the thirty-second day of the disease.

1455. A portion of the Ileum. In the upper part is seen a transversely oval ulcer extending down to the submucous tissues; its edges are formed by fringes of swollen mucous membrane, in part undermined, in part adherent to the surface of the ulcer. In the centre of the ulcer is a minute slit perforating the peritoneal coat. This is situated about twelve inches above the cæcum. Other ulcers are also present.

From a man, aged 27, who died in the London Fever Hospital 17th July, 1863, on the nineteenth day of the fever.

Presented by Dr. Murchison, F.R.S.

1456. A portion of the Ileum. Close to the upper end, five and a half inches from the cæcum, is an irregular ulcer, with its long diameter transverse. Its edges are formed by undermined mucous membrane; in its centre is a minute perforation, round which on the peritoneal surface is a large layer of recent lymph.

From a man, aged 21, who died in the London Fever Hospital on the twenty-fifth day of the disease. Until the twenty-third day the disease appeared to be of a very mild form, he was then suddenly attacked by peritonitis.

Path. Soc. Trans. vol. x.

Presented by Dr. Murchison, F.R.S.

1457. A portion of the Ileum. In the centre is an irregularly oval ulcer, two inches in long diameter. Its edges are formed by somewhat thickened mucous membrane, which especially at the upper part gradually smooths down into the surface of the ulcer. In its centre is a circular perforation one-third of an inch in diameter. Another ulcer is visible below the first one.

1458. A portion of the Ileum. In its centre is an oval perforation occupying the site of a Peyer's patch, it measures half an inch by one inch. Its edges are formed by slightly thickened mucous membrane.

From a youth, aged 15, who died in the Hospital 5th October, 1870, at the end of the sixth week of the fever.

P. M. Reg., vol. x, No. 85.

1459. The lower part of the Ileum. Peyer's patches are greatly enlarged, their edges much raised, and their surfaces covered with ragged, partially detached brown sloughs. The solitary glands are also enlarged, and their centres occupied by brown sloughs.

From a woman, aged 24, who died in the Hospital, 25th February, 1856, on the eighteenth day of the disease.

P. M. Reg., vol. ii, No. 461; *Med. Reg.*, vol. iii, No. 90.

1460. The lower end of the Ileum and Cæcum. Peyer's patches are reddened, infiltrated, and elevated; their surfaces are rugose and punctated. The solitary glands are also enlarged. The commencement of the large intestine is much congested, and its solitary glands are enlarged.

From an infant, aged 6 months.

Presented by Dr. Murchison, F.R.S.

1461. A portion of the Ileum. In the centre is seen an irregular circular ulcer, produced by the sloughing out of an infiltrated Peyer's patch, with a portion of the brown slough still adherent. The sloughing process has reached the peritoneal coat, and a crescentic perforation of one-eighth of an inch in length, partially closed by the still attached slough, is visible. This is situated about twelve inches from the cæcum. Another patch with the sloughs in part attached is seen above, besides numerous ulcers with clean surfaces.

From a man, aged 19, who died in the London Fever Hospital 29th August, 1858, on the twentieth day of the fever.

Reported in *Path. Soc. Trans.*, vol. x.

Presented by Dr. Murchison, F.R.S.

1462. A portion of the Ileum, presenting several irregular oval ulcers with their long diameters for the most part transverse to the axis of the bowel: the larger ones corresponding to Peyer's patches, the smaller to the solitary glands. The ulcers expose the transverse muscular coat. Their surfaces are granulating.

From a man, aged 20, who died in the Hospital 5th November, 1826, on about the forty-third day of the fever.

P. M. Reg., vol. iii, No. 578 ; *Med. Reg.*, vol. iii, No. 420.

SYPHILITIC ULCERATION.

1463. A Rectum, with part of the sigmoid flexure laid open, with the Uterus and Ovaries. The whole of the mucous membrane of the rectum has been destroyed by ulceration, except over a space of two inches in length opposite the top of the uterus, where it forms a sharply defined elevated patch.

1463A. A Rectum, laid open, with the Bladder and Uterus. Almost the whole of the mucous membrane of the uterus has been destroyed, and the calibre of the bowel nearly obliterated, numerous sinuses pass from the bowel and open around the anus ; bristles have been passed into these. The passage from the bowel above into the strictured portion only admits a narrow glass rod. There is an enormous deposit of fat around the rectum.

TUBERCULAR ULCERATION.

1464. A portion of the Ileum of a dog, which had been injected with tuberculous matter. Peyer's patches are much enlarged, and stand out prominently from the surface of the mucous membrane. Each oval patch is connected by lines of infiltration with the one on either side of it. The mucous membrane has a finely granular or velvety appearance.

1465. A portion of the lower part of the Ileum. Corresponding to Peyer's patches are groups of minute sharp circular ulcers. The patches themselves are very slightly elevated, and the mucous membrane between these minute ulcers unaltered. A few scattered ulcers are seen apart from the groups.

From a man, aged 50, who died in the Hospital 29th December, 1855. He had extensive infiltration and excavation of the lungs.

P. M. Reg., vol. ii, No. 423 ; *Med. Reg.*, vol. ii, No. 498.

1466. A portion of the Small Intestine, injected. It presents several ulcers of irregular shape, extending through the whole thickness of the mucous membrane, with sharply cut undermined highly vascular edges. The base of the ulcers present opaque yellow cheesy-looking deposits.

1467. A portion of the Small Intestine. The transverse spaces between the valvulæ conniventes are occupied by tracts of ulceration passing round the whole circumference of the intestine. The surfaces of these ulcers present minute opaque yellow nodules. The mucous membrane covering the valvulæ conniventes is for the most part free from ulceration. The disease was probably of tubercular origin.

1468. A portion of the Ileum. Peyer's patches are much swollen by tubercular infiltration, and their centres present deep irregular ulcers. The mucous membrane is studded with small flocculent processes.

From a man, aged 33, who died in the Hospital 5th December, 1861. There was extensive tuberculosis with excavation of the lung. Tubercular ulceration of the larynx, bladder, left ureter, and tubercular pyelitis.

P. M. Reg., vol. v, No. 1370.

1469. Three portions of Small Intestine, injected. The two lower ones present on their mucous surface opaque yellow tubercular granules, varying in size from a pea to a pin's head. It is apparent that the injection has not penetrated them, though the surrounding mucous membrane is highly vascular.

Presented by Dr. Goodfellow.

1470. A portion of the Small Intestine. Numerous oval ulcers are visible, extending nearly through the peritoneal coat. Their surfaces are for the most part clean, but some present minute opaque yellow deposits. In the centre of one is a perforation which would admit a No. 1 catheter. Recent lymph is smeared on the peritoneal surface.

Presented by F. Samwell, Esq.

1471. A portion of the Ileum. Three transversely oval ulcers are seen with somewhat raised edges, which are for the most part bevelled off towards the surface of the ulcer, but in places undermined. The surfaces of the ulcers are smooth and clean. In the centre of the lowest one is a ragged perforation, a quarter of an inch in diameter. Recent lymph is deposited on the peritoneal surface.

The patient, a boy, had tubercular disease of the mesentery. Fæcal extravasation occurred.

1472. A piece of the lower part of the Ileum, with infiltration and irregular ulceration of Peyer's patches. The peritoneum corresponding to these ulcers is studded with miliary tubercles.

From a man, aged 22, who died in the Hospital, 12th March, 1872, with empyæma and extensive tubercular disease of the lungs.
P. M. Reg., vol. ii, No. 79.

1473. A portion of Small Intestine, showing extensive ulceration, partly in the form of isolated oval ulcers, partly in that of irregular tracts. The ulcers have raised undermined edges, and ragged honeycombed surfaces, studded in places with opaque miliary granules. The larger tracts show commencing cicatrisation and contraction. In the centre of one is an irregular perforation an inch in width.

1474. A portion of the Ileum. The mucous surface presents numerous tracts of ulceration in the form of narrow bands, occupying the whole circumference of the intestine. They have raised infiltrated edges, ragged, rugose, and somewhat nodulated surfaces. The intestinal wall at these points is slightly puckered.

From a man, aged 54, who died in the Hospital 20th October, 1860. There was old tubercular consolidation of the lung.
P. M. Reg., vol. iv, No. 1146.

1475. A portion of Small Intestine. The mucous surface presents tracts of ulceration passing round the whole circumference of the bowel. In the centre of one is a minute perforation. The peritoneal surface is studded with opaque miliary granules.

SIMPLE STRICTURE.

1476.

Vide No. 1413.

MORBID GROWTHS.

CANCER.

1477. A portion of the Jejunum, showing two cancerous nodules. The lower and larger projects into the lumen of the bowel as a hard mass, the size of a walnut, with a deep excavation lying parallel with the axis of the bowel through its centre; the smaller is a more flattened but excavated nodule the size of a sixpence. Small cancerous masses are seen on the peritoneal surface corresponding to the positions of the two growths. A deep transverse depression crosses the larger growth on its peritoneal aspect.

From a woman, who died of cancer of the uterus.
See *P. M. Reg.*, 1877, No. 73.

1478. A portion of the Transverse Colon. For the length of about an inch the coats of the intestine are much thickened by cancerous infiltration, and the mucous membrane is ulcerated. The canal at this point is almost obliterated. The bowel behind the stricture is much dilated.

1479. A portion of the Transverse Colon, presenting an annular cancerous infiltration of the mucous and submucous coats resembling that of the last specimen.

From a man, aged 57, who died 17th April, 1866. The bowels were completely obstructed for ten days. For five months he had been liable to pinching and stabbing pains about the umbilicus and frequent attacks of constipation.

Path. Soc. Trans., vol. xvii, p. 140.

Vide Series XXII, No. 1534.

Presented by Dr. Cayley.

1480. A portion of the Colon. For the length of about an inch the mucous surface presents a ring of cancerous ulceration, with raised infiltrated edges and a hard base.

Presented by Dr. Goodfellow.

1480A. A portion of the Tranverse Colon. For a length of two inches the mucous and submucous coats are enormously thickened by cancerous infiltration in the form of a ring surrounding the canal of the intestine, which is narrowed to the calibre of a No. 2 catheter. A glass rod has been passed through the stricture.

1481. A portion of a Rectum. Three inches above the anus there is a stricture only admitting a glass probe, produced by a ring-shaped cancerous infiltration of the mucous and submucous coats for the length of about an inch. The bowel above is considerably dilated.

1482. A Rectum, laid open. Two and a half inches from the anus the mucous surface presents a tract of ulceration occupying the whole circumference of the bowel for a length of three inches; corresponding to this the coats of the bowel are much thickened by cancerous infiltration. Towards the upper part soft, ragged, cancerous ontgrowths project from the edges and surfaces of the ulceration. At one point the calibre of the bowel is much narrowed.

1483. A Rectum, laid open. At about its centre the bowel is much narrowed by cancerous infiltration of the mucous and submucous coats, causing very great thickening. This forms a ring round the intestine for the length of about an inch. The mucous surface is ulcerated.

From a man, aged 51, who died in the Hospital 3rd November, 1854. The lungs and liver were studded with cancerous nodules.

P. M. Reg., vol. ii, No. 400.

1484. A Rectum, laid open. Beginning three inches from the anus and extending upwards for about four inches, the whole mucous surface is ulcerated and covered by villous, polypoid, and colloid outgrowths. Above and below the mucous surface is puckered as if from commencing cicatrisation, and near the lower edge of the ulceration the calibre of the bowel is almost occluded. Fæces passed through a false passage in the cellular tissue, entering the rectum again three inches from the anus. On microscopical examination the morbid growth was found to consist essentially of hyperplasia of the tubular glands of the rectum, commencing by their distension, multiplication of their epithelial cells, and subsequent degeneration of the contents of these distended tubes, giving rise to the colloid aspect of parts of the growth.

The patient was a man, aged 57, who died in the Hospital March, 1868. He had suffered from diarrhœa, bloody motions, and pain in defæcation for nine months. There were tubercular deposits in the lungs and tubercular ulcers in the small intestine.

Reported, with drawings, in *Path. Soc. Trans.*, vol. xix.

Presented by Henry Arnott, Esq.

1485. A portion of a Rectum, with the Vagina and Uterus. The mucous surface of the rectum, about two inches above the anus, is infiltrated with a cancerous growth, which forms a raised ring around the bones for a distance of nearly two inches. The growth has perforated the posterior vaginal wall, and by contact with this spot the anterior wall has become affected.

COLLOID CANCER.

1486. A Rectum, laid open, with the Uterus and Ovaries. Extending upwards from the anus for a distance of about six inches the walls of the bowel are enormously thickened and converted into the tissue of colloid cancer. The infiltration affects all the coats of the intestine uniformly. Their thickness varies from one to two inches, and the calibre is considerably narrowed. Above the bowel is dilated, and two inches from the commencement of the infiltration is a small perforation.

From a woman, aged 22 who died in the Hospital in 1852, from the perforation, after having suffered from symptoms of stricture of the rectum for fourteen months.

1487.

POLYPUS.

1488. A portion of the Sigmoid Flexure of the Colon. Springing from the mucous surface is a polypoid outgrowth, about two inches in length, with a slightly bulbous end. When recent it was almost black in colour from congestion.

From a woman, aged 70, who died in the Hospital 18th April, 1865, of rodent ulcer of the orbit penetrating the cranial cavity.

P. M. Reg., vol. vii, No. 2043.

1489. A portion of the Sigmoid Flexure, laid open. Projecting from the mucous membrane, which otherwise appears healthy, is a single conical polypoid outgrowth three-quarters of an inch in length.

HÆMORRHOIDS.

1490. The lower part of a Rectum, with the Anus. Large hæmorrhoids are situated at the anal margin, and just within it are two deep oval ulcers.

From a patient who died of renal disease. Great suffering was produced by the condition of the rectum.

1491. The lower end of a Rectum, laid open, with the Anus. At the anal margin, partly covered with skin and partly by mucous membrane, are several large hæmorrhoids. The mucous membrane of the rectum presents some superficial erosion.

1492. A Rectum, laid open. Just within the anus is a polypoid excrescence, with a broad pedunculated base. Behind it can be seen a congeries of dilated veins.

INTESTINAL OBSTRUCTION.

1493. A portion of the middle of the Ileum. Impacted in it is a large, almost spherical, gall-stone, nearly four inches in circumference. It has been sawn in half, and the upper fragment removed. The mucous membrane of the intestine

corresponding to this has been destroyed by ulceration. The intestine above the obstruction is dilated. Its peritoneal surface is partly covered with lymph. The gall-stone had passed into the duodenum, through an ulcerated opening between it and the gall-bladder. (*Vide* Series XXIII, No. 1595.)

The patient was a woman, aged 46, who died in the Hospital 31st January, 1856. Twelve days before her admission, on 29th January, she was seized by bilious vomiting, to which she was very liable. This lasted two days, when she was attacked by sudden acute pain in the right iliac region, and from this time she had no motion of the bowels, with the exception of some scybala brought away by an enema, till her death. The vomiting continued and became stercoraceous.

Reported by Dr. Van Der Byl, in *Path. Soc. Trans.*, vol. viii; *P. M. Reg.*, vol. ii, No. 440. *Vide* Specimen No. 1494.

AFFECTIONS OF THE APPENDIX VERMIFORMIS.

1494. A portion of the Ileum, with the Cæcum and Appendix Vermiformis. The latter is enlarged, and contains a solid body, which is visible through a perforation situated about one and a half inch from its distal end.

1494A. Some Coils of the Ileum, with the Cæcum and Appendix Vermiformis. The end of the latter is adherent to the ascending colon, forming a band under which the portion of the ileum slipped, and thus became strangulated.

From a man, aged 26 years, who was admitted under the care of Dr. Douglas Powell 13th July, 1884. He stated that whilst lifting some hay three days previously he felt a sudden pain in the abdomen. Vomiting occurred immediately, accompanied by tenesmus and the passage of a small stool; nothing passed per anum subsequently. The vomiting continued, but was not stercoraceous.

Laparotomy was performed by Mr. Henry Morris on the day following admission, but the site of the obstruction could not be discovered. The patient died delirious the same evening.

SUBSTANCES DISCHARGED PER ANUM.

1495.

DISEASES OF THE PERITONEUM, OMENTUM, AND MESENTERY.

PERITONITIS AND ITS RESULTS.

1496. A portion of Small Intestine, the coils of which are firmly matted together by fibrous adhesions, the result of previous peritonitis.

1497.

TUBERCLE.

1498. A coil of Small Intestine, with its Mesentery. The peritoneal surface is thickly studded with opaque yellow tubercular deposits, varying in size from a pin's head to a hemp seed. The serous membrane is opaque and roughened by filaments of false membrane.

1499. A coil of Small Intestine, with its Mesentery. The serous surfaces are studded with white nodules, varying in size from a millet seed to a hemp seed. On microscopical examination they were found to consist of small round cells resembling lymph corpuscles with a scanty fibrillated matrix.

The patient was the subject of chronic peritonitis.

MORBID GROWTHS.

FATTY.

1500. A Loose Body from the peritoneal cavity.

Presented by F. Samwell, Esq.

1501. A portion of the Great Omentum, showing two pendant "steatomatous" tumours, *i.e.*, fatty growths, which have undergone degeneration.

Presented by F. Samwell, Esq.

1502. A Loose Body found in the peritoneal cavity; also a small piece of intestine with a similar body attached to it by a thin pedicle. The bodies consist of appendices epiploicæ which have undergone atheromatous degeneration.

1503. A portion of Intestine, to which are attached two of the appendices epiploicæ enlarged and degenerated.

CANCER.

1504. A portion of Small Intestine, with its Mesentery. The peritoneal surface is studded with cancerous nodules, some almost pedunculated. They vary in size from a millet seed to a horse bean. Flocculent outgrowths of false membrane are also visible, forming in two places considerable patches.

1505. A portion of a Diaphragm, the under surface of which is thickly studded with cancerous deposits. In the centre these have coalesced so as to form a somewhat reticulated pattern, which is probably due to the infiltration of the lymphatics.

1506. A portion of a Liver and Spleen, the peritoneal surfaces of which are coated by a layer of colloid cancer from half to one inch in thickness. The disease does not penetrate the capsule of the organs. A mass of colloid cancer from the omentum of the same case is suspended in the bottle.

From a woman, aged 42, who died in the Hospital 10th November, 1867. The disease originated in the sigmoid flexure of the colon, where it formed a large tumour, which at first was considered to be ovarian.

P. M. Reg., vol. viii, No. 116.

1507. The Great Omentum, with the Transverse Colon. The omentum is enormously thickened by infiltration of colloid cancer, and also thickly studded by tufted pedunculated growths of a similar deposit; like growths are attached to the transverse colon.

From a man, aged 44, who died in the Hospital 8th December, 1868. The disease originated in the pyloric end of the stomach.

P. M. Reg., vol. ix, No. 58.

1508. A mass of Omentum, infiltrated with colloid cancer. All the abdominal viscera were involved in the growth. The patient suffered also from acute phthisis.

P. M. Reg., 1853, No. 126.

ENTOZOA.

1509. A portion of the Great Omentum. In its lower part is a cyst, the size of a walnut, containing an echinococcus vesicle. Several small similar vesicles which have escaped are seen floating in the jar.

Presented by F. Samwell, Esq.

SERIES XXII.

HERNIÆ AND DISPLACEMENTS OF THE INTESTINAL CANAL AND OMENTUM.

ANATOMY OF HERNIÆ IN GENERAL.

Of the Hernial Sac.

1510. A left Innominate Bone and part of the Abdominal Wall, dried and varnished, showing the ring and sac of a large oblique inguinal hernia.

1511.

OF THE CONTENTS OF THE SAC.

1512. A piece of Small Intestine, laid open. Part of the circumference of the bowel was enclosed in a hernial sac, and is seen to be pinched off from the rest by a tight constriction.

1513.

OCCASIONAL RESULTS OF TAXIS.

RUPTURE OF INTESTINE.

1514.

REDUCTION "EN MASSE."

1515. A part of the Abdominal Wall from the right inguinal region, with the spermatic cord and testicle, showing a hernial sac returned "en masse."

From an elderly man, who had had an inguinal hernia for many years. It was usually easily reducible, but on an occasion about a week before his death, in attempting reduction, he returned both hernia and sac into the peritoneal cavity. Signs of obstruction followed, and laparotomy was performed, and the sac found lying in the abdomen. The neck of the sac was divided and the bowel relieved. He died a few hours later from shock. The patient was under the care of Dr. Douglas Powell and Mr. Henry Morris.

IRREDUCIBILITY FROM ADHESIONS OF THE CONTENTS TO EACH OTHER OR TO THE HERNIAL SAC.

1516.

ANATOMY OF PARTICULAR FORMS OF HERNIA.

INGUINAL HERNIA.

THE SAC AND ITS COVERINGS.

1517. The right Inguinal Region and half of the Scrotum. There is a large hernial sac, with a very wide neck, occupying the scrotum. A portion of the great omentum is attached to its interior; when recent it also contained a fold of the central part of the transverse colon. The testicle is seen below the sac, and the epigastric artery on the inner side of its neck.

From a dissecting-room subject.

OBLIQUE INGUINAL HERNIA.

1518.

Vide No. 1510.

DIRECT INGUINAL HERNIA.

1519.

UNUSUAL CONDITIONS ASSOCIATED WITH INGUINAL HERNIA.

1520. The sac of a large Scrotal Hernia. A portion of the wall of the sac has become converted into a hard fibrous plate.

From an old man, who had had a hernia for many years.

Presented by A. Pearce Gould, Esq.

HERNIA INTO THE VAGINAL PROCESS OF PERITONEUM. CONGENITAL HERNIA.

1521.

FEMORAL HERNIA.

THE SAC AND ITS COVERINGS.

1522. The sac of a Femoral Hernia, the neck of which is much constricted. The hernia became strangulated, but was reduced after division of some tight bands, without opening the sac, three days after symptoms of strangulation had appeared.

The patient, a woman, aged 57, died four hours after the operation. She had extensive gangrene of the lung and contracted granular kidneys. The case was under the care of Mr. Mitchell Henry.

P. M. Reg., vol. iv, No. 1091; *Surg. Reg.*, vol. vi, 1859, No. 458.

1523. A coil of Small Intestine with its Mesentery. The lower part was enclosed in the sac of a femoral hernia and strangulated. It is discolored, and covered with lymph, and marked off above and below the seat of the constriction by a distinct groove. At one of these the intestine has sloughed and its cavity laid open.

1523A. A portion of Omentum forming a sac, which was situated within a hernial sac. There were recent adhesions of the bowel to the omental sac at the point where the thin membranous bands are seen.

Removed from a woman during an operation for strangulated femoral hernia. Ten hours later the bowel ruptured, but the patient recovered.

Presented by Henry Morris, Esq.

UNUSUAL RELATIONS OF THE OBTURATOR ARTERY.

1524.

UMBILICAL HERNIA.

1525. An Umbilical Hernia, with the sac laid open by operation. A coil of small intestine, covered by lymph, is seen to occupy the sac, and is perforated at its lower part by a large opening produced by sloughing; its margins are shreddy. The opening between the sac and the peritoneal cavity is closed by adhesions between its margins and the contained loop of bowel, except at its upper part, where the incision for the relief of the strangulation is visible on the posterior aspect of the specimen.

1526. An Umbilical Hernia, containing a loop of small intestine, which is everywhere united to the inside of the sac by fibrillated adhesions.

Presented by R. Cartwright, Esq.

VENTRAL HERNIA.

1527.

OBTURATOR HERNIA.

1528.

DIAPHRAGMATIC HERNIA.

1529. The Chest and Abdomen of a Fœtus of the full period. On the left side several coils of intestine are protruded through the diaphragm into a sac which reaches as high as the third rib, but which is separated from the pleural cavity. The heart is pushed over to the right side.

1529A. The Body of a Fœtus born at full time. The left half of the diaphragm is deficient, allowing the corresponding lobe of the liver to bulge into the thorax and compress the left lung, which in consequence has remained stunted and dwarfed. The apex of the heart is pushed over to the right side.

Presented by J. B. Sutton, Esq.

INTERNAL STRANGULATION.

BY FIBROUS BANDS.

1530. A coil of Intestine one and a half feet in length, tightly constricted by a thick round band which encircles the neck of the coil like a loop.

From a man, aged 68, who was the subject of irreducible inguinal hernia. Symptoms of strangulation showing themselves, the hernia was operated upon by Mr. Nunn, and reduced. The symptoms continuing, the wound was again opened, but no stricture was found. The patient died two days after the operation. On post mortem examination numerous old adhesions were found passing between various coils of intestine; these had become organised, so as closely to resemble normal mesentery.

Presented by T. W. Nunn, Esq.

BY REMAINS OF THE OMPHALO-MESERAIC DUCT.

1531.

BY APERTURES IN THE MESENTERY OR OMENTUM.

1532.

INTUSSUSCEPTION.

OF THE SMALL INTESTINE ALONE.

1533. A portion of the Small Intestine. One and a half inches of the upper part, with its mesentery, is invaginated into the lower; this, which forms the sheath of the invagination, is laid open, so as to display the intussuscepted portion.

OF THE ILEUM INTO THE CÆCUM.

1534. The lower part of the Ileum and Cæcum. The cæcum and first part of the colon were occupied by a mass the size of a small cocoa nut, formed by the lower part of the ileum, which has descended through the ileo-cæcal opening. The invaginated portion when recent was almost black in colour, and œdematous. It presents at its lower extremity, round the central canal, an irregular somewhat nodulated mass, ragged and spongy on the surface, and white on section. This on microscopical examination presented a well marked alveolar structure, the alveoli being filled with large round and nucleated cells. At the point where the invaginated portion was constricted by the ileo-cæcal valve was a perforation which gave rise to fæcal extravasation.

From a man, aged 55, who died in the Hospital 9th May, 1867. He had suffered from abdominal pain and vomiting since the preceding Christmas. There was no permanent obstruction to the bowels.

Path. Soc. Trans., vol. xviii.

OF THE ILEUM AND CÆCUM INTO THE COLON.

1535.

OF THE LARGE INTESTINE.

1536. A portion of the Transverse and Descending Colon. At their junction four inches of the upper part of the bowel are invaginated into the lower. The invaginated part is highly congested and firmly held *in situ*. The containing part of the bowel or sheath, which is laid open, is dilated. There are no adhesions.

The patient, a healthy female infant, aged 5 months, was attacked on the night of 19th May, 1861, with vomiting and pain. The vomiting recurred every time she took nourishment. The bowels had acted normally up to this time, but no motion passed subsequently, notwithstanding the administration of purgatives and enemata; the napkins were, however, noticed to be stained with blood. The child died 23rd May. After the first accession of the symptoms it scarcely cried, or showed indications of suffering pain.

Presented by Dr. Cooper Rose.

SEPARATION OF INTUSSUSCEPTED INTESTINE.

1537. An inverted portion of Small Intestine five inches in length, which appears to have been invaginated and strangulated. It sloughed and became entirely detached at the line of constriction.

From an infant, 7 months old.

VOLVULUS.

1538.

SERIES XXIII.

INJURIES AND DISEASES OF THE LIVER, GALL-BLADDER, AND BILIARY DUCTS.

MALFORMATIONS.

1539.

INJURIES.

1540. A portion of Liver with three Ribs and part of the integument. A rifle bullet has traversed the liver without lodging, and fractured one of the ribs.

From a soldier wounded at the battle of Sedan, 1870.

Presented by Dr. John Murray.

1541. A portion of the right lobe of a Liver. The surface is mottled dark red by a diffused extravasation of blood into the substance of the liver beneath the capsule. At one point where the diaphragm was adherent there is a black patch of superficial hæmorrhage on the surface. The substance of the liver when fresh presented a similar dark red mottling. There were extravasations beneath the peritoneal covering of the uterus, in the ovaries, and beneath the endocardium.

From a woman, aged 24, who died of hæmorrhage during labour 16th November, 1869.
Path. Soc. Trans., vol. xxi, p. 220.

Presented by Dr. John Murray.

1542.

1543.

RUPTURE OF THE GALL-BLADDER.

1544.

OPERATIONS ON THE GALL-BLADDER.

1545.

DISEASES OF THE LIVER.

THICKENING OF THE CAPSULE.

1546. Portion of a Liver. The capsule covering the convex upper surface is greatly thickened and opaque, and here the liver is not nodular or granular. The under surface, however, where the capsule was not thickened, was cirrhotic. The liver weighed forty-four ounces.

From a tailor, aged 44, a gin drinker, who died in the Hospital 30th December, 1856. In August, 1853, he was admitted with great ascites, from which he had been suffering for ten months, and for which he had been repeatedly tapped. While an in-patient he was tapped three times. He was discharged at the end of eleven weeks cured of the ascites, and he remained well and able to work till December, 1856, when he was attacked by pleurisy with great effusion, and died after an illness of three weeks. There was no return of the ascites.
P. M. Reg., vol. iii, No. 600; *Med. Reg.*, vol. i. No. 142, and vol. iii, No. 546.
For the spleen of the same case, *vide* Series XXV, No. 1609.

SYPHILITIC GUMMATA.

1547. Portions of a Liver and Spleen. Embedded in the substance of the liver, apparently projecting into it from the capsule, is a firm opaque yellow mass the size of a bantam's egg; it is subdivided into lobules by a narrow track of semi-transparent fibrous tissue. A similar mass of larger size occupies a depression in the spleen, from the pulp of which it is separated by a fibrous capsule. This mass springs from the under surface of the diaphragm.

From a female, aged 27, who was affected with syphilitic disease of the dura mater.
Path. Soc. Trans., vol. xiii, p. 250.

Presented by Dr. Murchison, F.R.S.

1548. A portion of the right lobe of a Liver. Its surface presents deep cicatricial depressions, and embedded in its substance are several opaque yellow deposits, or gummata, varying in size from a hazel nut to a walnut. The hepatic tissue is in a condition of amyloid degeneration.

From a female, aged 20, who died in the Hospital 27th February, 1870, with syphilitic caries of the nasal bones and palate, also amyloid degeneration of the liver, spleen, and kidneys. The disease appeared to have been hereditary.
Path. Soc. Trans., vol. xxi, p. 214.

1549. A small portion of the Liver occupied by an irregularly shaped opaque yellow mass or gumma subdivided into separate lobules by narrow tracts of semi-transparent fibrous tissue, which also form a partition between it and the substance of the liver.
Path. Soc. Trans., vol. xxi.

Presented by Dr. J. F. Payne.

1550. The left lobe of the Liver of an infant 3 months old, who died rather suddenly on 13th October, 1875. More than three-fourths of the liver tissue is replaced by a new growth which, in the recent state, presented a transparent orange-yellow colour, and extended into the right lobe for the distance of an inch. The main mass measured four inches from right to left, and two and a quarter inches antero-posteriorly. Small isolated nodules can be seen on the inferior aspect of the lobe. The microscopical characters of the growths were those of gumma in its early stages. There was also interstitial nuclear growth in the heart and kidneys, and a solitary gummatous nodule in the right lung.

The child was affected with congenital syphilis.
Reported in *Path. Soc. Trans.*, vol. xxvii, p. 303, by Dr. Sidney Coupland.

SYPHILITIC CIRRHOSIS.

1551.

CIRRHOSIS.

1552. A portion of a Liver, injected. The section presents groups of lobules in the form of opaque yellow circular masses, separated from one another by narrow tracts of semi-transparent, greyish, highly vascular, fibrous tissue. The surface of the liver, which is seen at the edges of the preparation, is nodulated by the projection of these groups of lobules. This constitutes the condition known as "hob-nail liver."

1553. A portion of the right lobe of a Liver, with the Gall-Bladder, which is much dilated. The surface of the liver is finely nodulated or "hob-nailed," the capsule opaque and thickened. The section presents small islands of liver tissue of yellow colour, many apparently formed by single nodules, separated by tracts of semi-transparent grey fibrous tissue. The liver was shrunken, weighing only thirty-six ounces.

The patient, a butler, aged 68, who had been a hard drinker, died in the Hospital 22nd October, 1862. There was great ascites, valvular disease of the heart, and contracted granular kidneys. The dilated gall-bladder contained upwards of sixty small black concretions.
P. M. Reg., vol. v, No. 1505.

1554.

HYPERTROPHIC CIRRHOSIS.

1555. A portion of a Liver. The surface is smooth, the capsule thickened, and presents in places fibrous adhesions. The section is generally pale, with patches and tracts of a dark jaundiced hue. The lobular structure of the liver is much obscured. On microscopical examination the hepatic tissue was found to be extensively replaced by tracts of nuclei resembling lymph or white blood corpuscles, embedded in a more or less abundant fibrous ground substance. The liver was greatly enlarged and very dense in texture; it weighed eighty and three-quarter ounces.

From a man, aged 41, who died in the Hospital 20th September, 1868. He had been a hard spirit drinker. He suffered from jaundice, which continued for eighteen months, vomiting, hæmorrhage from the stomach and bowels, and at last from violent delirium. During the last eight months he presented patches of vitiligoidea on the eyelids. There was no ascites.
Reported in *Path. Soc. Trans.*, vol. xx, p. 187.

Presented by Dr. Murchison, F.R.S.

1556.

ACUTE YELLOW ATROPHY.

1557. A Liver, which is reduced to half its normal size. It is flabby, its surface wrinkled, with here and there some extravasation under the capsule; its substance is of a brownish-yellow colour, and the lobular structure is in great measure effaced. On microscopical examination the liver cells were found extensively destroyed and replaced by an oily granular detritus in which were large quantities of leucin and tyrosine.

From a woman, aged 19, who died in the London Fever Hospital 15th February, 1868, of acute yellow atrophy, after an illness of a month's duration. Her symptoms were jaundice, violent delirium, vomiting of matters containing blood, and diarrhœa.
Reported in *Path. Soc. Trans.*, vol. xix, p. 248.

Presented by Dr. Murchison, F.R.S.

1558.

CHRONIC ATROPHY.

1559. A Liver, which is diminished to less than half its normal size; it weighs only twenty-two ounces. The left lobe is especially atrophied, measuring only one inch in width. The capsule is somewhat thickened, and the surface wrinkled and granular. There was no induration. On microscopical examination the liver cells were found loaded with dark pigment and very granular, but there was no interlobular fibrous growth or nuclear proliferation.

From a man, aged 62, who died in the Hospital 14th January, 1868, with ascites and hæmorrhage from the stomach and bowels, after an illness of two months' duration. He had drank much beer but no spirits.
Reported in *Path. Soc. Trans.*, vol. xix, p. 252, by Dr. Cayley.

1560.

LARDACEOUS DEGENERATION.

1561. A section of a Liver in a state of lardaceous degeneration. The disease is far advanced, and the amyloid infiltration in many places involves the entire lobule. The liver weighed twelve pounds.

From a man, aged 50, who died in the Hospital, 19th July, 1856. He had caries of the os innominatum, sacrum, and ribs.
P. M. Reg., vol. iii, No. 697.

1562. A section of a Liver, presenting the semi-transparent glistening appearance characteristic of lardaceous degeneration. The lobular structure is well marked, and the deposit can be seen to form a zone surrounding the central vein, which forms a white spot. External to the amyloid zone a narrow tract of unaffected liver tissue can be distinguished.

From a case of caries of the hip joint.

ABSCESS.

1563. A portion of the right lobe of a Liver, showing two abscess cavities with ragged walls. A portion of the diaphragm is adherent to the upper surface of the liver.

1564.

THROMBOSIS OF THE PORTAL VEIN.

1565.

INFARCTUS.

1566. A portion of a Liver, showing a wedge-shaped caseous mass, consisting of liver tissue degenerated from blocking of the tributary vessels, owing to the lodgment of an embolus.

From a case of Enteric Fever.
Vide *Path. Soc. Trans.*, vol. xv, p. 132.

Presented by Dr. Murchison, F.R.S.

MORBID GROWTHS.

MYXOMA.

1567. A section of a Liver and of a large Tumour which extends between the posterior border of the liver and the base of the right lung. It infiltrates both organs for some distance together with the intervening diaphragm. The tumour has now an opaque yellow appearance, and is breaking down in some places. A large vessel is seen to be blocked by a thrombus. On microscopical examination it presented the characters of myxoma.

From a woman, aged 39, who died in the Hospital 4th November, 1872. On 18th December, 1871, Mr. Nunn removed a myxoma from the right breast of eight months' duration. The tumour recurred and was removed by galvano-cautery and caustic on 25th January.
Reported in *Path. Soc. Trans.*, vol. xxiii, p. 274, and vol. xxiv, p. 120.

SARCOMA.

1568.

MELANOTIC TUMOURS.

1569. A portion of Liver, infiltrated with a melanotic sarcoma, which was secondary to a similar growth in the eye. The microscopical appearances were those of spindle-celled sarcoma.

For account of case *vide* Series V, No. 571.

1570. Sections of portions of a Liver which is studded thickly with dark brown specks of melanotic sarcoma, with some similar deposits of larger size. The lower portion of the specimen consists of liver tissue which has become completely bleached. The upper part forms a mass of medullary cancer. The melanotic deposits occur in both portions. Similar deposits were found in the bones and other organs.

1571. A portion of a Liver, very deeply and almost uniformly infiltrated with black pigment. Softening appears to be in progress over some small areas.

CANCER.

1572. A portion of the right lobe of a Liver, presenting numerous cancerous nodules, varying from a quarter of an inch to four inches in diameter. The centre of the largest one is seen on section to have become converted into a radiating fibrous cicatricial tissue, and its peritoneal surface presents fibrous adhesions. The liver weighed twelve pounds.

From a man, aged 28, who died in the Hospital 28th April, 1856. There were numerous cancerous deposits in the cranial bones, dura mater, sternum, humerus, lungs, and spleen. The one in the humerus was the first noticed.

Path. Soc. Trans., vol. ix, p. 234.

1573. A portion of the right lobe of a Liver, embedded in which is a cancerous nodule the size of a large walnut. It projects slightly above the peritoneal surface, and its centre is broken down so as to form an irregular cavity, which in the recent state contained a milky fluid, composed chiefly of an oily granular detritus.

From a man, aged 55, who died in the Hospital 22nd March, 1868. There was a large primary cancerous tumour growing from the sides of the bodies of the lumbar vertebræ, with secondary deposits in the lumbar and mediastinal glands, the lungs, liver, and supra-renal capsules.

P. M. Reg., vol. viii, No. 162.

1574. A portion of the right lobe of a Liver. Projecting from its upper surface are numerous highly vascular nodules varying in size from a pea to a walnut. One of these ruptured before death, and caused great hæmorrhage into the peritoneal cavity; a clot of blood, weighing five ounces, which is seen at the bottom of the jar, was found lying on the upper surface of the liver. The section of the liver presents numerous cavities, varying in size from a hemp-seed to a cherry, which in the recent state were filled with a soft, pulpy, bright yellow substance, apparently formed by the disintegration of the cancerous masses. The liver is highly cirrhotic, as well as infiltrated by cancer.

From a man, aged 50, who died in the Hospital 28th August, 1861. He had been a hard spirit drinker. Four days before his death he became suddenly worse, and sank into a state of collapse, with urgent vomiting and great hepatic pain and tenderness.

Path. Soc. Trans., vol. xiii, p. 100.

Presented by Dr. Murchison, F.R.S.

1575. Section of a portion of a Liver, containing numerous cancerous nodules. They present a well marked fibrous framework, and are but slightly injected.

Presented by F. Samwell, Esq.

1576. Section of a portion of a Liver, which is occupied by several large cancerous nodules, which have partly coalesced. The injection has only partially penetrated them, and is chiefly derived from the hepatic artery.

1577. Section of a large cancerous nodule from the Liver.

Presented by F. Samwell, Esq.

NAEVUS (Angioma).

1578.

ENTOZOA.

1579. A Liver. Projecting from its upper surface and anterior border is an enormous hydatid cyst, the size of an adult head. The walls are thick and fibrous. In the recent state it was filled with daughter vesicles.

1580. A jar filled with Hydatid Vesicles from the preceding specimen. They are of all sizes, some opaque, others transparent; in most of them opaque spots are visible corresponding to the brood spaces of the scolices.

1581. A portion of the lobe of a Liver and the base of the right Lung. Projecting from the upper surface of the liver is a large hydatid cyst the size of a fœtal head. Its upper surface is firmly adherent to the diaphragm, and it communicates with the pleural cavity by a perforation one and a quarter inches in diameter, which is situated behind the base of the lung. This latter is collapsed and firmly adherent to the upper part of the diaphragm. The inner surface of the cyst is roughened by patches of partially detached lymph. At the bottom of the jar are seen portions of the mother cyst and many daughter cysts; several of these escaped into the pleural cavity, which was found filled with purulent fluid.

From a woman, aged 34, who died in the Hospital 11th April, 1861. Twenty-six days before her death, having had no previous symptoms, she was suddenly seized with signs of acute pleurisy with effusion. The existence of hydatids were not detected before death.
P. M. Reg., vol. iv, No. 1234.

1582. A portion of a Liver, with the Duodenum, which is laid open, and the common Bile Duct. In the substance of the right lobe is a shrunken hydatid cyst not now lined by the vesicles, but which in the recent state contained four or five collapsed hydatid daughter vesicles. This cavity communicates with a dilated branch of the hepatic duct, and so with the common bile duct, which is capable of admitting the little finger. Occupying the duct and projecting through the orifice into the duodenum is a collapsed hydatid vesicle.

The patient was a gentleman, aged 53, who had passed large numbers of hydatid vesicles in his motions, this being preceded by symptoms resembling the passage of a gall-stone through the bile duct.
Path. Soc. Trans., vol. xvi, p. 160.

Presented by Dr. Murchison, F.R.S.

1583. A portion of a Liver, with the Duodenum and common Bile Duct. In the position of the left lobe of the liver, which has disappeared, is a large hydatid cyst communicating with the common bile duct by an opening large enough to admit a full-sized catheter. The duct is obstructed by masses of hydatid membranes which are seen to project through its orifice into the duodenum.

From a woman, aged 30, who died in the Hospital 18th February, 1868. The tumour had been present since the age of 14, without causing any inconvenience. In January, 1868, she was suddenly seized with symptoms of inflammation of the tumour, followed by jaundice and complete absence of bile from the motions. The tumour was tapped, and fœtid pus mixed with bile containing fragments of echinococcus cysts was drawn off, and the cyst was afterwards washed out with a weak solution of carbolic acid. The patient ultimately sank from pneumonia.
Path. Soc. Trans., vol. xix, p. 256.

Presented by Dr. Murchison, F.R.S.

1584. A portion of a Liver, containing a hydatid cyst; the hydatid membrane is partially detached. Above is suspended a piece of a parent cyst with a daughter vesicle attached to it.

1585. A portion of a Liver showing a hydatid cyst at the outer border of the right lobe. The cyst has been laid open, and the hydatid vesicle shrivelled up is seen lying inside. At the upper part of the cyst there is a rupture of its wall.

From a boy, who was run over by a van, which passed across the lower part of his chest. The hydated vesicle and the sac wall were ruptured, but not the peritoneal covering, and there was free hæmorrhage into the cyst.

1586. Colourless opalescent fluid removed by tapping from a hydatid cyst of the liver.

DISEASES OF THE GALL-BLADDER AND BILIARY DUCTS.

DILATATION AND THICKENING.

1587. The Gall-Bladder, with the Common and Cystic Duct. The gall-bladder is greatly dilated, and in the recent state was filled with colourless glairy mucous. Impacted in its neck is a small concretion. The common bile duct is normal.

Vide Series XXIV, No. 1601 ; *vide* No. 1582.

1588.

EFFECTS OF INFLAMMATION.

1589. A portion of a Liver, with the Gall-Bladder and a piece of the Transverse Colon. The gall-bladder is much elongated and narrowed, its fundus is firmly adherent to the transverse colon, and communicates with it by a circular orifice four lines in diameter. The cystic duct was found obliterated, and there were marks of old inflammation about the transverse fissure of the liver.

From a woman, aged 60, who died in the Hospital, February, 1870, of cancer of the uterus and peritonitis. Five months before her death she was attacked by violent abdominal pain and retching, but without jaundice ; the symptoms of cancer soon followed.

1590. A Gall-Bladder, cut in half, the walls of which are completely calcified. It contained a small nodulated concretion, which is present in the jar. There was also a small quantity of bile in the gall-bladder.

From a woman, aged between 60 and 70, who died jaundiced, having suffered from disturbance of the bowels for some months previously.

Presented by F. Samwell, Esq.

OBSTRUCTION OF THE BILIARY DUCT.

1591.

Vide Nos. 1582, 1587, 1588, 1601.

GALL-BLADDERS CONTAINING CALCULI.

1592. A Gall-Bladder filled with calculi.

1593. A Gall-Bladder, containing a calculus which has spontaneously fractured into two pieces. The smaller is blocking the orifice of the duct.

1594.

ULCERATION OF THE GALL-BLADDER WITH PERFORATION FROM THE PRESENCE OF CALCULI.

1595. A portion of a Liver, with the Gall-Bladder, the Stomach, and Duodenum. The fundus of the gall-bladder is adherent to the first part of the duodenum, and a fistulous opening exists between them, through which a glass rod is passed. A large gall-stone escaped through the opening, and caused death by obstructing the intestine.

Vide Series XXI, No. 1193, where the history of the case is given.

1596. A portion of a Liver, with the Gall-Bladder. In a sac beneath it are a number of calculi, which have escaped through a perforation in the gall-bladder, and are now lying in a cavity formed by peritoneal adhesions.

MORBID GROWTHS.

1597. Sections of a Liver, showing a large cancerous mass of epithelioma involving the gall-bladder. Near the centre of the growth there is a cavity the size of a walnut representing the gall-bladder, and containing orange-coloured biliary calculi. The growth measures four and three-quarter inches antero-posteriorly. It had a yellowish-white appearance, and was very firm. A deep groove separates the upper border of the tumour from the hepatic tissue on the left side, but on the right side the margin of the growth was irregularly crenated. On microscopical examination the cells of the growth resembled those of the squamous variety of epithelioma rather than of the columnar type.

From a married woman, aged 56, who was admitted into the Hospital on 19th August, 1879, under the care of Dr. Cayley. The duration of her illness was six months.

Reported by Dr. Sidney Coupland in *Path. Soc. Trans.* vol. xxxi, p. 136.

Vide Series XXIV, No. 1601.

SERIES XXIV.

DISEASES OF THE PANCREAS AND SALIVARY GLANDS.

DISEASES OF THE PANCREAS.

FATTY DEGENERATION.

1598.

HYPERTROPHY.

1599.

CALCULI IN THE DUCTS.

1600.

MORBID GROWTHS.

1601. The right Lobe of a Liver, Duodenum, and Pancreas. The head of the pancreas is occupied by a cancerous tumour, the size of an orange, which caused almost complete obstruction of the bile ducts. These, with the gall-bladder, are enormously dilated, the common duct admitting a man's thumb. The lining membrane of the last half inch of the common duct is covered with sprouting cancerous outgrowths. The gall-bladder contained fifteen ounces of fluid.

From a man, aged 36, who died in the Hospital 21st October, 1857. He had suffered from permanent jaundice for nearly six months.

Vide *Path. Soc. Trans.* vol. ix, p. 228.

DISEASES OF THE SALIVARY GLANDS.

TUMOURS OF THE SUBMAXILLARY GLAND.

1602.

TUMOURS OF THE PAROTID GLAND.

1603. A Tumour, the size of an orange, removed from the neighbourhood of the parotid gland. The great bulk of the tumour is composed of a soft yellowish substance, showing under the microscope granular and amorphous matter. Numerous cysts have formed by the softening of this material. A few portions of the tumour present traces of fibro-cartilage. The facial nerve is compressed and flattened by the tumour, and is closely adherent to its upper and posterior part.

From the parotid gland of a man, aged 50; it had been growing for twenty-five years, and caused paralysis of the facial nerve.

Presented by C. De Morgan, Esq., F.R.S.

1604. A section of a lobulated enchondromatous Tumour, the size of a Tangerine orange, removed from the parotid region of a man, aged 22, in whom it had existed for two years.

1605. A portion of an enchondromatous Tumour, removed from the right parotid region of a man, aged 23. It was soft, and of the size of a bantam's egg.

Reported, with microscopical drawings, by Mr. Arnott, in *Path. Soc. Trans.*, vol. xx.

Presented by C. De Morgan, Esq., F.R.S.

1606. An Enchondroma removed from the parotid region.

Presented by J. W. Hulke, Esq., F.R.S.

SERIES XXV.

INJURIES AND DISEASES OF THE SPLEEN.

INJURIES.

RUPTURE.

1607.

DISEASES.

THICKENING OF THE CAPSULE.

1608. A Spleen, divided through the centre, presenting a very dense fibrous investment, in places measuring three-quarters of an inch in thickness. The trabecular structure of the spleen is also thickened.

1609. A portion of a Spleen. The capsule is converted into dense fibrous membrane two lines in thickness. There were similar thickenings of the capsule of the liver.

Vide Series XXIII, No. 1546.

1610. A portion of a Spleen. The capsule is very dense and greatly thickened, measuring in places upwards of an inch.

HYPERTROPHY.

1611.

ATROPHY.

1612.

CHANGES IN AGUE.

1613.

CHANGES IN ENTERIC FEVER.

1614.

LARDACEOUS DEGENERATION.

1615. A portion of a Spleen, which was considerably enlarged, and in which the malphigian bodies were infiltrated with a lardaceous deposit, the "sago grain" spleen.

Vide Series XXVI, No. 1650.

TUBERCLE.

1616.

1617. Half of an enlarged Spleen, which is thickly studded with opaque yellow deposits of tubercle, generally about the size of a pea: most of them presenting on section a vessel in their centre.

Presented by A. Cribb, Esq.

1618.

SYPHILIS.

1619. A portion of a Spleen, showing a syphilitic gumma.

INFARCTUS.

1620. A section of a Spleen, which is thickly studded with irregular cavities, varying in size from a pin's head to a cherry; these in the recent state were filled with a puriform fluid, which however on microscopical examination was found not to consist of true pus. Many of these cavities are now seen to be in part occupied by opaque yellow solid masses resembling old thrombi, and throughout the spleen the small vessels are seen to be plugged. The spleen is much enlarged, and its capsule thickened.

From a woman, aged 44, who died in the Hospital 14th May, 1861. She had cirrhosis of the liver and contracted fatty kidneys.

P. M. Reg., vol. iv, No. 1265; *Med. Reg.*, vol. viii, No. 182.

Vide Series XIV, No. 1123.

1621. A portion of a Spleen. Situated beneath the capsule, and extending for a considerable depth into the substance of the spleen, are dense opaque yellow deposits produced by embolism. There was also embolism of the left middle cerebral artery, with softening of the left hemisphere, and embolisms of the kidneys and obstruction of the femoral and axillary arteries by coagula.

From a girl, aged 17, who died in the Hospital 14th December, 1855. There was endocarditis of the left auricle.

P. M. Reg., vol. ii, No. 419; *Med. Reg.*, vol. ii, No. 599.

1622. A section of a Spleen, showing several dense caseous-looking deposits, probably infarctions the result of embolism. One older than the others is seen to be undergoing contraction.

Vide Series XIV, No. 1123.

ABSCESS.

1623. The upper half of an enlarged Spleen, of which the lower half was softened down into an abscess, containing half a pint of reddish pus. The lower surface of the preparation, which formed part of the wall of the abscess, presents a distinct rough false membrane.

From a woman, aged 65, who died in the Hospital 18th January, 1856, of cancer of the external organs of generation.

P. M. Reg., vol. ii, No. 434.

1624. A greatly enlarged Spleen, presenting opaque yellow deposits of various sizes, which form projections on the surface, and are surrounded by patches of intense congestion. Some of these have softened down so as to form pyæmic abcesses.

From a case of thrombosis of the intra-cranial sinuses caused by a spindle-celled sarcoma of the dura mater.

MORBID GROWTHS.

LYMPHADENOMA.

1625.

CANCER.

1626. A Spleen, greatly enlarged and almost entirely converted into a mass of cancer. No other cancer was found in the body.

Path. Soc. Trans., vol. xxiv, p. 222.

Presented by W. O'Conner, Esq., M.D.

1627. Half of a greatly enlarged Spleen, which is studded throughout with highly vascular cancerous nodules.

ENTOZOA.

1628. Spleen of a Mouse Deer (*Moschus Pygmaus*), containing two large hydatid cysts.

1629.

SERIES XXVI.

DISEASES OF THE LYMPHATIC GLANDS AND VESSELS, OF THE THYMUS AND THYROID GLANDS, AND OF THE SUPRA-RENAL BODIES.

DISEASES OF THE LYMPHATIC GLANDS AND VESSELS.

ENLARGEMENT, WITH CASEOUS DEGENERATION.

1630. A portion of the Mesentery and Small Intestine, showing a number of enlarged and caseous lymphatic glands. Tubercular ulcers may be seen in the mucous membrane of the intestine.

CALCIFICATION.

1631.

TUBERCLE.

1632.

Vide No. 1630.

SYPHILIS.

1633. Enlarged Lymphatic Glands from the axilla. From a syphilitic subject.

Vide also Series III, No. 157; Series V, 496.

Presented by J. B. Sutton, Esq.

PIGMENTATION.

1634.

MORBID GROWTHS.

LYMPHADENOMA.

1635. A cluster of enlarged Glands, removed during life from a boy suffering from lymphadenoma.

LYMPHO-SARCOMA.

1636.

MELANOTIC TUMOURS.

1637.

CANCER.

1638. Portions of the Pelvis, Spine, and soft parts from the same as Nos. 1719, 1720. A large tumour lies in the angle between the left external and internal iliac arteries, and the former vessel is stretched and flattened over it. The obturator artery lies beneath and in contact with it; and the gluteus, sciatic, and internal pudic arteries pass through its posterior portion. A dense fascia seen over the external iliac vein, bound the tumour to the pelvis and psoas muscle. In parts this fascia has yielded, and fungoid outgrowths protrude. The mass is of soft, medullary consistence, and pulsated during life; in consequence of this a ligature, still *in situ*, was placed around the common iliac artery. A similar but smaller lobulated growth exists on the right side of the pelvis, and enlarged and infiltrated glands are seen on the surface of the vertebræ.

Vide Series XXVIII, Nos. 1719, 1720.

1639. Sections of three Lymphatic Glands infiltrated with cancer.

From the axilla of a patient whose hand was amputated by Mr. C. De Morgan.
Vide Series XX, No. 52.

DISEASES OF THE THYMUS GLAND.

ENLARGEMENT.

1640.

DISEASES OF THE THYROID GLAND.

ENLARGEMENT (Bronchocele).

1641. A Thyroid Gland, showing great enlargement of the lateral lobes; the isthmus also is enlarged, and is prolonged upwards.

1642. A Thyroid Gland, presenting great uniform enlargement. A section is made of the two lateral lobes, showing dilatation of the cells of the gland and hypertrophy of the interstitial connective tissue. On one side a concretion is seen embedded in the gland.

1643. An enlarged Thyroid Gland and the Larynx, from a case of bronchocele. The enlargement mainly affects the isthmus; the gland entirely surrounds the larynx.

Presented by Dr. Cayley.

SPECIMENS ILLUSTRATING THE CONDITION OF THE THYROID GLAND IN MYXŒDEMA.

1644.

OPERATIONS ON THE THYROID GLAND.

1645. A Thyroid Gland, much enlarged and solid throughout.

From a girl, aged 14, a resident of Dorking, in Surrey. The swelling commenced at the age of ten; the growth increased to such an extent as to give rise to dyspnœa and dysphagia. When sitting or standing the growth hung over the sternum. It was removed 12th July, 1884. The patient made a complete and rapid recovery. Microscopically the gland was of the normal structure.

Presented by Henry Morris, Esq.

MORBID GROWTHS.

1646. A portion of an enlarged Thyroid Gland, which is infiltrated with a cancerous growth of an uncertain nature. Several areas are seen to be softening.

DISEASES OF THE SUPRA-RENAL BODIES.

AMYLOID DEGENERATION.

1647.

TUBERCULAR DISEASE.

1648. A Supra-Renal Capsule, which is considerably thickened. Projecting from its surface are yellow tubercular nodules, varying in size from a large pea to a pin's head.

Presented by F. Samwell, Esq.

Vide following specimens.

CHANGES IN ADDISON'S DISEASE.

1649. The Supra-Renal Capsules, one somewhat enlarged, the other of normal size. The larger one consists mainly of yellow cheesy nodules, with intervening semi-transparent fibrous tracts, but at its ends still shows portions of the proper structure of the organ. The smaller one presents opaque yellow cheesy deposits, but the proper structure is only in part obliterated.

From a man, aged 30, who was admitted into the Hospital for psoas abscess. He died suddenly, 7th November, 1862, apparently from thrombosis of the pulmonary artery. There was no bronzing of the skin. The lumbar vertebræ were affected with caries.

P. M. Reg., vol. v, No. 1513.

1650. A Supra-Renal Capsule and a portion of the Spleen. The former, which is slightly enlarged, consists of yellow cheesy nodules with intervening narrow fibrous tracts. The latter, which has been touched with iodine, presents innumerable isolated spots of amyloid infiltration, each with the open mouth of a vessel in its centre.

1651. The Supra-Renal Capsules and two portions of the Skin, one showing the nipple and areola. The right capsule is greatly enlarged; the left one moderately so. They both consist of opaque yellow cheesy and calcareous nodules, separated by semi-transparent grey fibrous tracts. The portions of skin, especially the nipple, are of a sooty colour.

From a coal porter, aged 32, who died in the Hospital 28th March, 1868, after an illness of about ten months; he presented the usual symptoms of Addison's disease. Nine years before he had sprained his back, and had suffered more or less pain ever since. After death an encapsuled abscess was found in connection with the lower dorsal and upper lumbar vertebræ, the bodies of which were eroded. Obsolete tubercular deposits existed in the lungs.

Path. Soc. Trans., vol. xvii, p. 307.

1652. Half of each Supra-Renal Capsule, showing advanced caseation.

From a case of Addison's disease.

1653. A right Supra-Renal Capsule, divided. It is shrunken and entirely converted into opaque yellow cheesy substance, with intersecting fibrous tracts. The other capsule was similarly diseased. There was no other disease present.

From a man, aged 20, who died in 1867, after an illness of about six months' duration. There was well-marked bronzing of the skin.

Path. Soc. Trans., vol. xx, p. 388.

1654. A Supra-Renal Capsule, Tongue, and the External Organs of Generation. The right capsule is much enlarged; it weighed one ounce and a half. The fibrous envelope is much thickened, and adherent to the diaphragm. The natural structure is almost entirely destroyed, and the organ consists of opaque yellow cheesy substance, partially intersected by greyish semi-transparent lines, which diverge from an irregular patch of similar material in the hilum, this patch itself being studded with yellow cheesy nodules. The left capsule is

much smaller; it weighed half an ounce. It is even more completely degenerated, and consists of irregular opaque cheesy and calcareous masses, separated by semi-transparent grey tracts. In many places are irregular cavities, which were filled with granular *débris* and puriform fluid. The skin of the penis and scrotum is of a very dark colour, and the mucous membrane of the tongue presents dark brownish-black patches on the sides and tip.

From a man, aged 55, who died in the Middlesex Hospital, with the symptoms of Addison's disease, after an illness of four months' duration. There were old cheesy deposits in the lung, and deposits of tubercle in the peritoneum.

Path. Soc. Trans., vol. xvii, p. 304.

1655. Both Supra-Renal Capsules and a piece of Skin. The capsules are of about the normal size, but their normal structure is entirely effaced, and they present the usual characters of advanced Addison's disease. The portion of skin is of a dark brown colour.

From a man, aged 43, who died in the Hospital 17th September, 1867, with well-marked symptoms of Addison's disease, which had existed for two years. All the other organs were normal.

Path. Soc. Trans., vol. xix, p. 404.

1656. Two Supra-Renal Capsules, with the Kidneys and several portions of Skin, of which two are from the breast, and show pigmentation of the areolæ. The capsules are much enlarged and caseous.

From a case of Addison's disease.

1657. A right Kidney, with its Supra-Renal Capsule. The capsule is much enlarged, and when recent contained a quantity of thick puriform fluid. It now consists of irregular cheesy and calcareous masses, partly isolated by cavities. The left capsule presented similar characters. There was extensive tubercular ulceration of the small intestine. The other organs were normal.

From a case of Addison's disease.

1658. A right Supra-Renal Capsule, with the corresponding Kidney, seen in section; also the External Organs of Generation. The supra-renal body is enlarged to nearly three times its natural size. Its fibrous capsule is much thickened, and its normal structure has entirely disappeared, being replaced by opaque yellow masses, in part of cheesy consistence, in part calcified. The kidney is normal. The penis and scrotum are of a dark hue, approaching that of a negro, whilst the surrounding skin is somewhat less deeply pigmented. The other supra-renal capsule was in a similar condition.

From a boy, aged 15 years, who for a year had been losing strength and altering in complexion. He suffered from chilly sensations, pain in the back and loins, vomiting and diarrhœa. He died in an attack of erysipelas.

Reported by Dr. W. T. Gairdner, in *Path. Soc. Trans.*, vol. xv, p. 224.

Presented by Dr. Murchison, F.R.S.

1659. The Supra-Renal Capsules, Solar Plexus, Aorta, and four Vertebræ from a case of Addison's disease. The supra-renals are considerably enlarged, they have not been laid open. The semilunar ganglia are enlarged, as are also the other ganglia of the solar plexus and the nerves. The various parts of the plexus were matted together by fibrous tissue.

From a youth, aged 19, who died in the Hospital. He was under the care of Dr. W. Cayley.

1659A. The Ganglia and Nerves of a Solar Plexus with one of the Supra-Renal Bodies attached. The parts are quite normal. They are placed here for comparison with the dissections of similar parts from cases of Addison's disease.

Presented by J. B. Sutton, Esq.

1660. A dissection of the Solar Plexus and Semilunar Ganglia, with the left Supra-Renal Capsule and Kidneys, preserved *in situ*, from a case of Addison's disease.

From a man, aged 37, who died in the Hospital 17th January, 1884. He had been under observation for nearly four years, and had been an in-patient of the Hospital on four different occasions, the first being in June, 1881. He first showed symptoms of Addison's disease about the year 1876, and it was on account of an exacerbation of these symptoms, attacks of vomiting, faintness, lassitude, and extreme debility, that compelled him to seek admission. On the last occasion he was in a most prostrate condition, from which he never rallied. There was decided pigmentation of the skin, notably of face, hands, axillæ, and groins; and also patches on the lingual and buccal mucous membrane. The pigmentation varied in intensity with the severity of the constitutional symptoms. At the post mortem examination no trace of a right supra-renal capsule could be found, a few small pellets of orange coloured fat apparently marking its site. The left capsule is thin and atrophied, reduced to about one-third of the normal size, and free from any of the characteristic infiltration. The semilunar ganglia appeared to be swollen and indurated, and the sympathetic nerve plexus matted to the surrounding tissues.

From a case under the care of Dr. Sidney Coupland.

1661. The Supra-Renal Capsules, Solar Plexus, and Semilunar Ganglia from a case of Addison's disease.

The case was that of a man, aged 22, admitted in a moribund condition into the Hospital 17th September, 1883. He had enjoyed very good health, and there was no tubercular taint in the family. Symptoms of Addison's disease had only been observed since the previous March, and about the same time he had received a blow on the chest, which resulted in the formation of a cold abscess. The symptoms were mainly that of debility, and a tendency to somnolence, so that he was compelled to abandon his employment. His skin had been observed to have been getting darker in tint for some months. Vomiting never occurred. The asthenia increased, and emaciation occurred. At the time of death there was marked, but by no means intense, pigmentation of the face, hands, and genitals. The supra-renal capsules are much enlarged, and characteristically nodulated. No tubercle was found elsewhere, but there was notable hyperplasia of the follicular glands of the small intestine, of the mesenteric glands, and of the Malpighian follicles of the spleen. In the chest wall was an abscess containing creamy pus (a few ounces), and burrowing beneath the right pectoral muscle; it was not connected with diseased bone.

The dissection by Dr. J. J. Pringle.

From a case under the care of Dr. Sidney Coupland.

1662. A left Kidney and Supra-Renal Capsule. The latter is greatly enlarged, weighing thirty ounces; it is lobulated on the surface, and converted into a cancerous mass, in the centre of which are patches of softening. The liver was infiltraled with cancer, and weighed twelve pounds eight ounces. The right supra-renal capsule was normal. There was no discoloration of the skin,

From a man, aged 19, who died in the Hospital 12th May, 1873.

1663. Two Supra-Renal Capsules, with the Solar Plexus. The capsules have undergone caseous degeneration. The plexus with the associated nerves ganglia are matted together by dense connective tissue. There was a small cavity in the apex of the right lung. The heart and aorta were of very small size.

From a boy, aged 20, who died in the Hospital in 1883. He was under the care of Dr. Douglas Powell.

Dissected by J. B. Sutton, Esq.

MORBID GROWTHS.

SARCOMA.

1664. A Kidney, with a tumour adherent to it. The growth is twice the size of the kidney, measuring three inches in its long and two inches in its short diameter, and was presumed to be the supra-renal capsule. On microscopic examination it presented the characters of medullary sarcoma. The other capsule was healthy.

From a girl, aged 12, who had previously suffered from scarlatinal dropsy; she appears to have died of pleuro-pneumonia. There was no bronzing of the skin.
Path. Soc. Trans., vol. xviii, p. 260.

CANCER.

1665. A Supra-Renal Capsule, with a small nodule of cancer the size of a pea embedded in it.

1666. A right Kidney and Supra-Renal Capsule. The latter is much enlarged, and converted into a mass of hard cancer.

From a man, aged 55, who died in the Hospital 22nd March, 1868, of cancer of the lumbar vertebræ, with deposits in the lungs, liver, and glands. The other capsule was unaffected; there was no bronzing of the skin or other symptoms characteristic of Addison's disease.
Path. Soc. Trans., vol. xix, p. 416.

1666A. A left Supra-Renal Capsule, which has embedded in it a nodule of epithelial cancer the size of a hazel nut.

From a man, aged 47, who died in the Hospital April, 1868, of cancer of the tongue. There was no bronzing of the skin or symptoms of Addison's disease.
Path. Soc. Trans., vol. xix, p. 418.

SERIES XXVII.

INJURIES AND DISEASES OF THE URETHRA, PENIS, AND SCROTUM.

MALFORMATIONS.

1667.

For examples of Ectopia Vesicæ and Epispadias, *vide* Series XXIX, Nos. 1726, 1727; also Series XLII, Nos. 190, 193.

1668.

SPURIOUS HERMAPHRODITISM.

1669. The external Organs of Generation of a so-called hermaphrodite. The enlarged clitoris simulates a penis; there is a distinct uterus.

Vide Series XLII, Nos. 196, 197, 198.

INJURIES.

1670. A Penis, with the urethra laid open, showing an irregular opening of a false passage in the lower wall, through which a piece of glass has been passed. This is seen to emerge on the right side of the urethra at the point of section of the penis about an inch further on. There is no stricture of the urethra. The injury was the result of catheterism.

The patient was suffering from paraplegia.

1671. A Bladder and Urethra, with the Pubis: the latter is fractured close to the symphysis. The membranous portion of the urethra has been lacerated by the fractured pubis, extravasation of urine occurred, and an abscess has formed below the urethra.

STRICTURE OF THE URETHRA.

LINEAR AND ANNULAR STRICTURES.

1672. A Urethra, partly separated from the Penis. It presents annular stricture at two points, the first situate about four inches from the orifice, the second at the commencement of the membranous portion. The prostate, urethra, and the portion included between the strictures are considerably dilated.

1673. A portion of a Penis, with the urethra laid open, showing a slight constriction about one and a quarter inches from the orifice.

1674. A Penis, Urethra, and Bladder. There is an annular stricture of the urethra just in front of the bulb. The prostatic urethra and the bladder are dilated, and the muscular walls of the latter are slightly hypertrophied.

Presented by Richard Cartwright, Esq.

STRICTURE BY THICKENING AND CONTRACTION OF A CONSIDERABLE PORTION OF THE CANAL.

1675. A Bladder, Urethra, and Pubic Arch. The urethra is narrow in its whole extent, but the posterior part of the spongy portion is much contracted, and its walls thickened by inflammatory deposit. Just behind the stricture the urethra is ulcerated, and a sinus opens externally beside the tuber ischii by a tortuous route near the left crus penis. The prostate contains a calculus. The bladder is large, and presents several sacculi opening by narrow orifices, through which bristles are passed. One of them is of the size of a hen's egg, it opens into the floor of the bladder just behind the trigone.

BRIDLE STRICTURE.

1676.

CONSEQUENCES OF STRICTURE.

DILATATION OF THE CANAL BEHIND THE STRICTURE.

1677. A Penis, Urethra, and Bladder. There is a stricture of the urethra of considerable extent in front of the bulb. Behind it the lower wall of the urethra is deficient, probably the result of operative measures. Just beyond the opening, and probably at the end of the stricture portion, the urethra becomes dilated almost to the ordinary size of the small intestine. The bladder is dilated, and its walls hypertrophied.

1678. A Urethra, laid open. There is a stricture occupying about one inch of its length; behind this the canal is much dilated.

Vide Nos. 1672, 1673.

ULCERATION OF THE URETHRA, EXTRAVASATION OF URINE, URETHRAL ABSCESS, AND FISTULA.

1679. A Bladder, Urethra, and Penis. There is a slight stricture at the bulbous portion, where the mucous membrane is ulcerated.

From Mr. Shaw's Collection.

1680. The Bladder and Penis of a negro. There is a stricture in the membranous portion of the urethra, and immediately behind is the opening of a fistula, through which a bristle is passed, traversing the prostate. The bladder is thickened, and its mucous membrane inflamed and rough.

1681. A Bladder and Urethra, with the Integument of the Perineum. The urethra is strictured at its membranous portion. Immediately behind the stricture is a fistulous opening, leading by a long tract to the skin of the perineum. The prostate is enlarged.

Vide Specimen No. 1690.

1682. A Bladder and Urethra. About four inches from the bladder the urethra is interrupted, and the two ends open into a large irregular cavity with a limiting membrane, which is lined by recent lymph. At the anterior extremity of the cavity the urethra was found somewhat dissected up and curling forwards.

From a man, aged 62, who died in the Hospital April, 1858. For seven years his water was constantly dribbling away, but he could always expel it in a free stream when he wished; he was also liable to sudden stoppages, due apparently to the curling forwards of the anterior end of the urethra. He was admitted for an attack of retention. It was found impossible to pass a catheter into the bladder, but on passing it down to the seat of obstruction the urine readily flowed away. Perinæal section was performed, and the cavity opened, but an instrument was not introduced into the bladder. The kidneys were diseased, and the patient died of uræmia.

Reported, with a drawing, in *Path. Soc. Trans.*, vol. ix, by Mitchell Henry, Esq.

1683. A Urethra, Penis, and Bladder. There is a stricture of the urethra just in front of the bulb. The urethra has ulcerated through behind the stricture. Extravasation of urine occurred, and a urinary fistula and subsequently an abscess formed. The urethra has been incised behind the stricture. The bladder is hypertrophied.

1684. A portion of a Urethra, laid open, showing a tight stricture at the bulb, up to which point a probe is introduced. Immediately behind this is a fistulous opening into the canal, through which a red bougie is passed. There are several false passages in the prostatic portion of the urethra.

1685. A Penis, Urethra, and Bladder. There is a stricture of the urethra about the bulb. The urethral wall has ulcerated through behind the stricture, and an abscess has formed beneath the bulb; this communicates with the canal through a fistulous opening. The bladder has been tapped through the rectum, and the recto-vesical pouch of the peritoneum perforated.

1686. A Bladder and Urethra. In front of the bulbous portion is a stricture, and at this point two fistulous tracts pass from the floor of the urethra to the perineum. Pieces of whalebone are introduced into them. The bladder is much hypertrophied.

1687. A Penis and Bladder. The prostate is enlarged, and the urethra strictured at the bulb. The bladder is hypertrophied. The penis has been injected, and the anterior three inches of the urethra are seen to be extremely vascular. This is attributed to gonorrhœa.

1688. A Bladder and Urethra. There is a stricture at the bulb, and immediately behind it is a sinus which opened on the perineum. The bladder is hypertrophied.

1689.

HYPERTROPHY OF BLADDER.

Vide Specimens Nos. 1674, 1675, 1677, 1680, 1683, 1684, 1686, 1688, 1692, 1694; and Series XXX, No. 1812.

DILATATION OF URETERS AND PELVIS OF THE KIDNEY.

Vide Series XXX, Nos. 1810, 1812.

EFFECTS OF THE TREATMENT OF STRICTURE.

FALSE PASSAGES.

1690. A Bladder and Penis, with the integuments of the Perineum. There is a stricture in the bulbous portion, immediately in front of which is the opening of a false passage which would admit a full-sized catheter. At the seat of the stricture a long fistulous tract leads from the urethra and opens in the centre of the perineum. The urethra behind the stricture is greatly dilated, and the lining membrane fenestrated. The prostate is enlarged, and the opening into the sinus pocularis is dilated.

1691. A Bladder and Penis. There is a stricture in the bulbous portion of the urethra, and immediately in front is the opening of a false passage, through which a glass rod is passed. This does not re-enter the urethra.

1692. A Bladder, with part of the Penis and Urethra. The urethra is strictured at the bulb; immediately anterior to the stricture is seen the opening of a false passage which passes above the urethra and enters it again close to the exit from the bladder. The urethra behind the stricture is much dilated. The bladder is hypertrophied, and its mucous membrane presents patches of lymph. There is an abscess in the bulb and another one in the prostate.

1693. A Penis and Urethra. The urethra is strictured for a considerable length; a false passage passes beneath it, and after traversing the sacs of several abscess cavities re-enters the canal in front of the prostate. The penis is riddled with cavities.

Presented by Richard Cartwright, Esq.

1694. A Urethra, with the base of the Bladder. There is a stricture in the bulbous portion; a false passage, through which a quill is passed, opens into the membranous part of the urethra.

Presented by R. Cartwright, Esq.

Vide No. 1684; also Series XXVIII, Nos. 1716, 1724.

1695.

DISEASES OF THE PENIS.

PHIMOSIS AND PARAPHIMOSIS.

1696. A Prepuce from a case of extreme phymosis. The prepuce, which was removed by circumcision, shows an orifice scarcely larger than a pin's head.

1697. A similar specimen.

SIMPLE AND SYPHILITIC ULCERATION.

1698.

1699. A Penis, with the scar resulting from a Hunterian chancre.

For history of case and reference to other preparations from the same case, *vide* Series III, No. 157.

Presented by J. B. Sutton, Esq.

MORBID GROWTHS.

1700. The end of a Penis. The glans and prepuce are converted into an irregular lobulated tumour the size of a fist, the surface of which is composed of broad condylomatous outgrowths of epithelioma. The penis was amputated.

1701. A Penis, divided. It is greatly thickened, and the glans and corpora cavernosa for a distance of about five inches are infiltrated with cancer. The infiltration terminates abruptly behind, and the remaining portions of the corpora cavernosa are normal. The glans is for the most part eaten away by ulceration, the left side being more destroyed than the right. The corpus spongiosum, except the part connected with the glans penis, is healthy. The skin was not affected. The microscopical characters were those of epithelioma.

From a man, aged 69, who died in 1865. The disease began seven years before in the scar of a chancre, contracted at the age of 35. The inguinal glands became infiltrated and ulcerated.

Path. Soc. Trans., vol. xvii.

Presented by W. S. Sibley, Esq.

1702. The end of a Penis, removed by amputation. The glans and inner surface of the prepuce are covered with warty excrescences of epithelioma.

1703. The end of a Penis. The under surface of the prepuce and glans have been extensively destroyed by ulceration, and are covered by warty outgrowths.

1704. The end of a Penis, removed by amputation. The glans is partially destroyed by ulceration, and the remainder made up of firm cancerous tissue. The skin and prepuce are unaffected.

From a man, aged 55. The disease was of three months' duration. Amputation was performed November, 1865. In October, 1866, the patient returned to the Hospital, the disease had reappeared, and extended to the scrotum. The disease was again removed.

Path. Soc. Trans., vol. xvii, p. 180.

DISEASES OF THE SCROTUM.

HYPERTROPHY.

1705.

ELEPHANTIASIS.

1706.

Vide Series XLII, Nos. 187, 188.

TUMOURS.

FIBRO-CELLULAR.

1707. A fibro-cellular Tumour of the Scrotum.

Presented by R. Cartwright, Esq.

HORNY GROWTHS.

1708.

EPITHELIOMA.

1709. A portion of a Scrotum infiltrated with cancer. It is enormously thickened, nodulated, and irregularly ulcerated. From a chimney sweep.

SERIES XXVIII.

DISEASES OF THE PROSTATE GLAND.

HYPERTROPHY.

General Enlargement.

1710. A Bladder and Prostate. The latter is enlarged, and gives rise to a projection into the bladder at the exit of the urethra, in the form of a nodular tumour the size of a walnut, which is grooved by the urethra; this corresponds to the position of the so-called third or middle lobe of the gland.

Presented by Campbell De Morgan, Esq., F.R.S.

1711. A Bladder, Prostate, and Symphysis Pubis. Projecting into the bladder from the prostate immediately behind the orifice of the urethra is a nodule the size of a hazel nut. The prostate is generally enlarged, and the corresponding part of the urethra curved downwards. The bladder is hypertrophied, and its muscular fibres form a projecting interlacement on the inner surface. At one point is seen the mouth of a sacculus the size of a large horse-chestnut.

1712. A Bladder and Prostate. The latter is uniformly enlarged, and the corresponding part of the urethra is narrowed. The bladder is thickened and its mucous membrane rough and studded with villous outgrowths.

From Mr. Shaw's Collection.

1713. A Prostate and the base of a Bladder. The whole prostate is greatly enlarged, especially the part surrounding the urethra, which consequently has this part of its course lengthened and also curved downwards. There is also a distinct nodule which projects into the floor of the bladder just behind the orifice of the urethra. On section the enlargement is seen to be due to simple hypertrophy.

Irregular Enlargement.

1714. A Bladder and Prostate Gland. The right lobe of the latter is much enlarged, and the corresponding part of the urethra is narrowed. The bladder is thickened, and its mucous membrane rough and studded with villous outgrowths.

From Mr. Shaw's Collection.

1715. The base of a Bladder and the Prostate. The latter is much enlarged, presenting irregular nodular tumours which project into the bladder and narrow the urethra. Some of the veins proceeding from the prostate contain phleboliths.

From Mr. Shaw's Collection.

Vide Series XXVII, No. 1690.

ENLARGED PROSTATE PIERCED BY INSTRUMENTS.

1716. A Bladder with the Prostatic portion of the Urethra. The prostate gland is slightly enlarged, and through it are two false passages, one of which opens into the bladder just beside the urethra.

Vide Specimen No. 1714.

ABSCESS OF THE PROSTATE GLAND.

1717. A Bladder and Prostate, with part of the Urethra. The bladder is hypertrophied, contracted, and its mucous membrane inflamed. Just behind and internal to the orifice of the right ureter is a circular perforation leading into an abscess the size of a small walnut, apparently formed by the vesiculæ seminales. The right vas deferens opens into this. Another abscess beneath the bladder communicates with the former, and a third in the prostate surrounds the membranous portion of the urethra and passes up in front of the pubis. Both vasa deferentia were filled with tubercular matter; numerous facetted semi-transparent concretions were found in the prostate and in the abscesses. There were tubercular abscesses in the testicles, which are preserved in the Museum, Series XXXI, No. 1850, and obsolete tubercles in the lungs.

From a man, aged 68, who died 15th January, 1864.
P. M. Reg., vol. v, No. 1734.

1718. A Bladder, enormously hypertrophied and dilated, with a portion of the Urethra. As a result of ulceration of the urethra, probably the consequence of a stricture, an abscess has formed in the prostate, and communicates with the bladder. Another larger abscess sac situated behind the bladder is also in communication with it; glass rods have been passed through the openings into the bladder.

TUBERCULAR DISEASE.

Vide No. 1717.

TUMOURS AND OTHER ALLIED MORBID GROWTHS IN THE PROSTATE GLAND.

1719. The right half of a Prostate Gland, Vesiculæ Seminales, trigone of the Bladder, and a portion of the Rectum. Springing from the upper and posterior part of the prostate, which elsewhere retains its normal shape, is a tumour the size of a hen's egg, which displaces the bladder, and projects into the recto-vesical pouch. The section shows the tumour to be continuous with the substance of the prostate, and to consist of a fibrous alveolated framework filled with soft medullary matter. On each side of the rectum are seen enlarged glands.

Vide Series XXVI, No. 1638.

1720. The left half of the same Prostate as the preceding specimen, presenting an outer lobulated surface, whilst the section shows that it envelopes the left vesicula seminalis and vas deferens.

1721. A Bladder and Prostate Gland, showing a fibroid tumour the size of a hazel nut embedded in the prostate in front of the urethra.

1722. A Bladder and Urethra laid open. The prostate forms a lobulated tumour the size of a large orange, which projects into and half fills the bladder. The greater mass of the tumour projects from the upper surface of the gland. On section it appears to consist of very dense fibroid tissue arranged in a lobulated manner.

From a man, aged 70, who died March, 1851.

1723. A Bladder and Urethra, laid open. The prostate forms a firm fleshy ovoid tumour eight inches in circumference and three and a half inches in length. It was resilient and had a semi-translucent appearance in the fresh state, quite unlike the tough fibrous character of simple hypertrophy. It presents an irregular lobulated appearance on the inner surface, and on the right side where it projects into the bladder its surface is ulcerated and villous. Its histological characters were of a small-celled growth embedded in fine fibrillar reticulum. There was no implication of lymphatic glands, but nodules of similar new growth occurred in the pancreas and right supra-renal capsule, whilst the kidneys were the seat of suppurative nephritis.

From a man, aged 29, admitted into the Hospital under Mr. Nunn's care on 22nd September, 1876. He was a police constable, and in 1872 had gonorrhœa and orchitis. His symptoms began three months before admission, with an attack of cystitis and retention of urine. Whilst in the Hospital he suffered from symptoms resembling those of vesical calculus. He died from uræmia fifty-four days after admission.

1723A. A Bladder and Urethra, laid open, showing the prostate gland enormously enlarged by a lymphomatous growth. The left lobe projects into the bladder, and is nearly equal in size to a small orange; the right lobe is enlarged to a much less degree. The bladder is dilated and hypertrophied.

From a man, aged 75. He died with acute suppurative nephritis.

Presented by T. W. Nunn, Esq.

CALCULI IN THE PROSTATE.

1724. A Penis, Urethra, and a portion of the Bladder. There is a stricture in front of the bulb, and a long false passage beneath the urethra. On the left side the prostate is hollowed out so as to form a cavity the size of a chestnut, with sacculations in its walls. In one of these a calculus is lodged. The large sacculus opens into the bladder just in front of the third lobe of the prostate. The bladder is enormously hypertrophied.

1725. A part of a Bladder with the prostatic portion of the Urethra. The latter is dilated into an irregular ulcerated cavity, lying in which is a somewhat oval calculus one inch in diameter.

From a man, aged 70, who died in the Hospital 8th April, 1864. He had suffered from symptoms of stone for three years, and there had been an urinary fistula for a year. Perineal section was performed five days before his death. He was also the subject of an enormous hydrocele.

P. M. Reg., vol. vi, No. 1801.

Vide Specimen No. 1675.

SERIES XXIX.

INJURIES AND DISEASES OF THE BLADDER.

MALFORMATIONS.

Ectopia Vesicæ.

1726. The lower part of the trunk of a female infant a few months' old. There is no umbilicus, and from its usual position down to the os pubis the anterior wall of the abdomen and of the bladder is deficient. The posterior wall of the bladder is prolapsed through the opening in the abdominal wall. Two bristles are passed through the mouths of the ureters. The upper wall of the urethra is deficient. The lower end of the vagina is occluded, above it is normal. The labia majora and minora are present. The symphysis pubis and recti muscles are deficient. The uterus, ovaries, and rectum are normal.

Reported in *Path. Soc. Trans.*, vol. xi, p. 135.

Presented by Dr. Priestley.

1727. The Integument of the Pubes, with the Penis, Bladder, Ureters, Testicles, and Spermatic Cords of a child. The anterior wall of the abdomen is deficient at its lower part, as well as the corresponding part of the bladder and the upper part of the penis. The mucous membrane of the bladder is seen protruding from the aperture.

Vide Series XLII, Nos. 191, 192, 193.

INJURIES AND OPERATIONS UPON THE BLADDER.

RUPTURE.

1728. A Bladder and Prostate. At the fundus of the bladder is a rent. The prostate is enlarged, and its so-called third lobe projects at the vesical opening of the urethra and narrows the canal.

CYSTOTOMY.

1729. *Vide* No. 1748.

LITHOTOMY.

1730. The base of a Male Bladder, with the commencement of the Urethra, laid open. A puckered glistening cicatrix is seen in the mucous membrane. Lithotomy had been performed five years before the patient's death. One of the kidneys contained a calculus.

TAPPING.

1731. A Bladder, Urethra, and Rectum. About two inches from the external meatus is a stricture, through which a fine bristle is passed, and which during life was found to be quite impermeable. The bladder was punctured through the rectum; an abscess subsequently formed between the bladder and rectum, and burst through the prostate into the urethra, which is much dilated. A rod is passed through the puncture into the bladder, which is much dilated.

The patient died one month after the operation.

HYPERTROPHY.

1732. The Bladder of a child who suffered from stone. It is contracted, and its muscular coat much thickened by hypertrophy.

For other specimens of hypertrophy, *vide* Series XXVII, Nos. 1680, 1682, 1683, 1686, 1687, 1688, 1690, 1691, 1692; Series XXVIII, Nos. 1723A, 1716, 1717, 1722; Series XXIX, Nos. 1733, 1734, 1735; Series XL, No. 2154.

PARTIAL DILATATION OR SACCULATION.

a. Of all the Coats.

1733. A Bladder and Prostate. The muscular walls of the former are much thickened, and the hypertrophied fibres form a projecting interlacement on the inner surface. Between these fibres are pits which form commencing sacculi, and consist of all the coats of the bladder. One on the left side deeper than the rest projects through the muscular walls. It has been perforated, and is seen to consist of the mucous coat alone. The mucous membrane is thickened and rough from chronic inflammation. There was a stricture of the urethra.

1734. A male Bladder laid open in front. Projecting from it on the right side is a sacculus the size of a walnut, communicating with the general cavity by an opening which would admit the forefinger. The coats of the bladder are hypertrophied, and the mucous membrane rough and villous. During life this sacculus formed a prominent tumour in the groin, which compressed and caused thrombosis of the iliac and femoral veins. It was punctured, and twelve ounces of urine drawn off.

From a man, aged 68, who died in the London Fever Hospital, February, 1863. There was a stricture of the membranous part of the urethra.

Path. Soc. Trans., vol. xiv, p. 133.

The vein is preserved in the Museum, Series XV, No. 1143.

Presented by Dr. Murchison, F.R.S.

b. Of the Internal Coat (Hernia of the Mucous Membrane between the Muscular Fasciculi).

1735. A Bladder and Prostate. The latter gives rise to a nodular projection into the bladder, immediately behind the exit of the urethra, the size of a hazel nut; this corresponds to the position of the so-called third lobe. The muscular coat of the bladder is hypertrophied, and on the inner surface presents a projecting interlacement of fibres resembling the musculi pectinati of the heart. Between these fibres are seen the mouths of numerous sacculi, which form projections on the outer surface of the bladder. The left ureter is double, and opens by two distinct orifices into the bladder. The kidneys were dilated, and the left one cystic. The left kidney is preserved in the Museum, Series XXX, No. 1811.

1736. A Bladder, which is enormously dilated, and presents at one point a large sacculus communicating with the general cavity by an orifice the size of a half-crown piece; the mucous membrane is sloughy, and hangs in shreds from the surface.

1736A. A Bladder and Prostate Gland. The "third" lobe of the prostate is enlarged to the size of a hazel nut; the lateral lobes are also enlarged. The bladder is much dilated, and sacculated, and the muscular walls are hypertrophied. On the right side there is a sacculus the size of a Tangerine orange, compressing the ureter, and causing dilatation of it. The left ureter is also dilated.

EFFECTS OF INFLAMMATION.

EXUDATION OF FALSE MEMBRANE.

1737. A Bladder, laid open. On the mucous membrane of the posterior wall near the base is an irregular patch of false membrane the size of a shilling. The prostate is enlarged, but there was no stricture.

From a man, aged 69, who died in the Hospital 19th May, 1861, of jaundice, caused by obstruction of the bile ducts by a cicatrix in the duodenum.
P. M. Reg., vol. iv, No. 1268.

1738. A Bladder, inverted. The mucous membrane is discoloured, studded with patches of exudation, and in some places presents shreddy sloughs.

ABSCESS.

1739.

ULCERATION.

1740. The Bladder and a portion of the Prostate. The mucous membrane of the bladder is rough, ulcerated, and studded with small villous tufts. The prostate is much enlarged. Projecting into the bladder from the orifice of the left ureter is a small ragged growth, composed of villous tufts. The terminal part of the ureter is filled by a mass resembling a coagulum.

From a man, aged 30, who had suffered for many years from stricture of the membranous part of the urethra. He died from cystitis. There was saeculation and pyelitis of the left kidney.

1740A. A Bladder, showing ulceration of the mucous membrane the result of inflammation. The prostate is enlarged. The orifice of the left ureter is surrounded by a villous growth.

Presented by Mitchell Henry, Esq.

SLOUGHING.

1741. The entire mucous coat of a Bladder, which forms a brownish-yellow ragged membrane, eleven inches by seven, and which was found to contain also submucous and muscular tissue. It was drawn from the urethra of a woman, aged 40, a month after a protracted labour, followed by retention. The patient ultimately recovered, but the bladder remained weak, and she could not hold her water for more than one hour or so.

Path. Soc. Trans., vol. xv, p. 137.

Presented by Dr. Murchison, F.R.S.

TUBERCULAR ULCERATION.

1742.

TUMOURS OF THE BLADDER.

VILLOUS GROWTHS.

1743. A female Bladder. Springing from its anterior wall is a tumour the size of an orange, composed of delicate long branched villous processes. Two smaller growths are attached on each side of the large one.

From a woman, aged 34, who died in the Hospital February, 1856. She had suffered from hæmaturia for three years.

Reported in *Path. Soc. Trans.*, with drawings, vol. vii, p. 256.

1744. A female Bladder. Attached by rather a narrow pedicle to the mucous membrane, close to the entrance of the urethra, is a villous growth the size of a walnut.

1745. A section of a male Bladder and Rectum. There is a fistulous opening on the floor of the bladder leading into the rectum, through which a glass rod is passed. Surrounding it is an extensive villous growth composed of long branched processes. The rectum presents an extensive tract of ulceration and folds of thickened mucous membrane, and some small villous growths. At the lower end of the sigmoid flexure are seen pouches produced by the retention of fæces. The right ureter is obstructed and dilated.

1746. Villous tufts from the preceding specimen, stained with carmine.

1747. A male Bladder, showing multiple villous growths. The muscular walls are hypertrophied. The ureters are dilated and the walls thickened.

Vide Specimen No. 1740.

1748. A Bladder, Urethra, and Penis. There are two large villous growths in the bladder, each situated near to the orifice of one of the ureters, and attached to the vesical wall by a narrow pedicle. The bladder is hypertrophied. An incision in the median line divides the membranous and prostatic portions of the urethra.

From a patient under the care of Mr. Henry Morris.

FIBROUS TUMOURS.

1749.

VILLOUS SARCOMA.

1750. A Bladder, laid open. Growing from the right side close to the entrance of the right ureter is an oval tumour one and a half inches in long diameter, of spongy texture, with its surface covered with villous processes. In the recent state the bladder was filled with coagula. There were no secondary deposits.

From a man, aged 60, who died in the Hospital 5th March, 1856.

P. M. Reg., vol. ii, No. 464.

EPITHELIAL AND MEDULLARY CANCER.

1751. A Bladder, laid open. Growing from its base, immediately behind the right ureter, is a soft ragged tumour two inches in diameter, which gives off a long process of similar nature. The coats of the bladder are not thickened. In the recent state the bladder was filled with coagula. There were no secondary deposits.

From a man, aged 60, who died the day after his admission into the Hospital 5th March, 1856.

P. M. Reg., vol. ii, No. 464.

1752. A Bladder, laid open. Growing from the base and posterior wall is a large soft tumour the size of an orange, lobulated, with a ragged, villous, and ulcerated surface. Several smaller growths of similar nature are attached to other parts of the mucous surface. The coats of the bladder are hypertrophied. There were no secondary deposits.

From a man, aged 32, who died in the Hospital 16th December, 1862, with double pneumonia and mitral insufficiency.

P. M. Reg., vol. v, No. 1520.

1753. A Bladder, Uterus, and Vagina. The base and posterior wall of the bladder are occupied by an extensive tract of ulceration reaching to the fundus. This ulcerated surface is covered with fungoid and villous outgrowths. All the coats of the bladder are involved, and at one point there is a perforation into the vagina which would admit a quill. Isolated patches of commencing ulceration and minute villous outgrowths are visible on other parts of the mucous membrane of the bladder. The vagina and uterus are normal.

1754. A Bladder, laid open, showing extensive infiltration of the fundus and muscular coats with medullary cancer. The affected parts present a rough ragged looking surface.

CALCULI AND OTHER FOREIGN BODIES IN THE BLADDER.

1755. The Bladder and Rectum of a man. Impacted in the bladder is a twig three inches in length, furnished with several lateral thorns; its end perforates the recto-vesical pouch of peritoneum. There is a perforation of the rectum, through which a bougie is passed. History unknown.

Presented by R. Cartwright, Esq.

Vide Specimen No. 1725.

CALCULOUS DEPOSIT ON THE MUCOUS MEMBRANE.

1756.

FOREIGN BODIES REMOVED FROM THE BLADDER.

1757.

SERIES XXX.

INJURIES AND DISEASES OF THE KIDNEYS, THEIR PELVES, AND THE URETERS.

MALFORMATIONS.

ABSENCE OF A KIDNEY.

1758. A Fœtus, showing a single kidney situated on the right side. The ureter is dilated and its coats are thickened. On the left side the supra-renal capsule is present, but there is no trace of a kidney, renal vessels, or ureter. The right kidney is twice the normal size.

Presented by J. B. Sutton, Esq.

1759. A Kidney, much enlarged, and showing two ureters and sets of vessels arising at different points. There was but one kidney. The bladder is shown with the ureters entering at the normal sites.

Presented by Dr. M. Balding.

Vide *Path. Soc. Trans.*, vol. xxviii, p. 159 ; *vide* Specimen No. 1811.

ARREST OF DEVELOPMENT.

1760. The Bladder, Kidneys, and Ureter. The right kidney consists of a small flattened sacculated body an inch in diameter, formed by a shrunken pelvis and calices without any true renal tissue. The upper third of the ureter is constricted to a narrow cord ; the middle third becomes suddenly dilated to the calibre of the little finger, at the termination of which there is a tight constriction. The remaining portion has the calibre of a crow quill. The left kidney is small, and its pelvis and ureter somewhat dilated.

Presented by Dr. McIntyre.

"HORSE-SHOE" KIDNEY.

1761. Two Kidneys of a young subject, which are united together at their lower ends by a narrow band of renal tissue. (In the preparation the upper ends of the kidneys are turned downwards).

1762. Two Kidneys, which are of large size, and are united at their lower ends by a broad band of renal tissue. Each kidney receives two large renal arteries which spring from the aorta, with an interval of one and a half inches between them.

ATRESIA OF URETERS (Hydronephrosis).

1763. The lower part of the Trunk of a female Fœtus. The ureters are imperfectly developed, and their vesical orifices are impervious; they also appear not to communicate with the pelves of the kidneys. The right kidney forms a cyst the size of a fist, with partial septa representing the divisions between the calices. The left kidney presents great dilatations of the pelvis and calices, which however are still bounded by a narrow border of renal tissue.

Presented by E. H. Ambler, Esq., 1864.

INJURIES AND OPERATIONS UPON THE KIDNEYS.

RUPTURE.

1764.

NEPHRORRAPHY.

1765.

NEPHROTOMY.

1766.

NEPHRECTOMY.

1767. A Kidney containing an Uric Acid Calculus.

From a man, aged 35, who had several times been in the Hospital for symptoms of renal calculus. His kidney was examined by lumbar incision in November, 1882. No stone could be detected either by palpation or puncturing the kidney with a needle.

He returned again to the Hospital in October, 1883, when a second examination was made, but no stone could be detected, and the kidney was removed through the lumbar incision. On dividing the organ the stone was discovered in a calyx at the upper part of the kidney.

The patient made a complete recovery.

On microscopical examination no changes were found in the kidney.

The patient was under the care of Mr. Henry Morris.

NEPHROLITHOTOMY.

1768. A Renal Calculus weighing thirty-one grains, consisting chiefly of oxalate of lime, removed by nephrolithotomy, on February 11th, 1880, from a girl aged 19 years, by Mr. Henry Morris.

The patient was admitted into the Hospital under the care of Dr. Sidney Coupland on 29th December, 1879, having been twice previously an in-patient, with symptoms of renal calculus. At this date (August, 1884) the patient is in the Hospital with signs of lardaceous disease. The sinus in the loin has never completely closed.

The case is fully reported in *Med. Chir. Soc. Trans.*, vol. xiv, p. 30.

Presented by Henry Morris, Esq.

DISEASES OF THE KIDNEYS AND THEIR PELVES.

HYPERTROPHY.

1769.

Vide Specimens Nos. 1758, 1759, 1771, 1808.

ATROPHY.

1770. A right Kidney. The upper half of the kidney is of the normal size, but presents a granular surface. About the centre it becomes suddenly shrunken to one-third of its normal bulk. The atrophied portion is irregularly nodulated.

1771. A right Kidney, which is deeply nodulated and less than one-third of its normal size; it weighed one ounce. The left kidney was hypertrophied, weighing thirteen ounces.

From a man, aged 31, who died 7th January, 1856, of cancer of the scrotum and groin. *P. M. Reg.*, vol. ii, No. 433.

LARDACEOUS DEGENERATION.

1772. A Kidney, seen in section. The organ is much enlarged, and extensively infiltrated with amyloid deposit. It stained deeply with tincture of iodine.

INFLAMMATION AND ITS RESULTS.

ACUTE PARENCHYMATOUS NEPHRITIS.

1773.

1774.

CHRONIC PARENCHYMATOUS NEPHRITIS (Large White Kidney).

1775.

1776.

CHRONIC INTERSTITIAL NEPHRITIS (Contracted Granular Kidney).

1777. A Bladder, with the Kidneys and Ureters. The kidneys are of extremely small size. The right one weighed one and a quarter ounces, the left three-quarters of an ounce. They are lobulated, but their surfaces are quite smooth. On microscopical examination they presented characters resembling those of the contracted granular kidney.

From a young man, aged 18, who had shown no symptoms of renal disease till fourteen days before his death, which took place from convulsions and coma, 13th May, 1871.
Path. Soc. Trans., vol. xxii, p. 177.

1778.

SUPPURATIVE NEPHRITIS AND PYELITIS.

1779. 1780.

TUBERCULAR NEPHRITIS.

1781. A Kidney, which is much enlarged, and in which almost the whole of the renal tissue has been destroyed by suppuration, secondary to inflammation of the pelvis. Each pyramid is replaced by a cavity with ragged walls; the pelvis and calices are much dilated, and their lining membrane rugose and ulcerated. The disease was probably of tubercular origin.

1782. A Kidney, enormously enlarged, and completely infiltrated with tuberculous matter, which has in great part undergone softening. The pyramids are replaced by ragged cavities. The pelvis and ureter are dilated, and their mucous lining ulcerated.

1783. A section of a Kidney of a young subject. The lining membrane of the ureter, pelvis, and calices of the upper half of the organ presents a yellow infiltration with an ulcerated surface; the infiltration and ulceration extend nearly to the cortex of the kidney.

1784. A section of a Kidney of a young subject. The commencement of the ureter and the lining membrane of the pelvis are ulcerated and shreddy. The renal tissue for some distance round the calices presents a yellow infiltration, which is softening down so as to form a ragged ulceration. Patches of yellow infiltration are also scattered irregularly through the substance of the kidney.

1785. A Kidney, bisected. The kidney is sacculated, and the pelvis and calices are filled with an opaque yellow solid material like putty. The ureter is ulcerated, and filled with similar material. The secreting tissue of the kidney has almost entirely disappeared.

From a man, aged 30, who died in the Hospital 19th December, 1871. He had angular curvature of the spine, but no tubercle of the thoracic or abdominal viscera. The other kidney was in a similar condition.

P. M. Reg., vol ii, No. 48.

TUBERCULAR DISEASE OF THE URETERS.

1786.

Vide Specimens Nos. 1782, 1783, 1784, 1785.

RENAL CALCULI AND THEIR EFFECTS.

CALCULI REMOVED DURING LIFE.

1787. 1788.

1789.

Vide No. 1768.

CALCULI IN THE KIDNEY.

1790. A Kidney, which is greatly enlarged and almost entirely made up of intercommunicating cysts. In one is a branched calculus. In the recent state other calculi were present, and the cysts were filled with purulent matter.

From an old man, who died of fracture of the skull. He was a hard drinker, and had been under treatment for many years for gravel. The other kidney was healthy.

1791. A Urethra, Bladder, and Kidneys. Both kidneys are enormously enlarged, the right one consists of a thick walled cyst the size of a fœtal head, formed by the dilated pelvis and calices. It is partially subdivided by septa, but no renal tissue remains. The commencement of the ureter is partially obstructed by the lower end of a calculus, one and a half inches in length, which is embedded in one of the sacculi. In the recent state this large sac was filled with pus glistening with scales of cholesterine. The left kidney is rather smaller than the right one, and also sacculated, but presents a thin layer of renal tissue expanded over its surface. The pelvis is occupied by an enormous calculus, five inches in length, which sends branches into the sacculi. Its surface is for the most part of a blackish-brown colour, but one detached fragment the size of a filbert was of snow-white colour, and composed of glistening satiny scales like spermaceti. On chemical examination by Dr. Marcet it was found to be composed of triple phosphate and phosphate of lime.

The patient was a man, aged 54, who died in the Hospital, February, 1868. He began to suffer from hæmaturia at the age of two years, after an injury. From the age of eighteen to that of forty his urine was free from blood, when it again re-appeared. While in the Hospital his urine contained pus and blood and large quantities of crystals of cholesterine. He died with convulsions and coma.

Reported by Dr. Murchison in *Path. Soc. Trans.*, vol. xix, p. 277.

1792. A Kidney, the lower part of which is sacculated, and contains three calculi.

1793. A Kidney, in the pelvis of which is a conical calculus, two inches in circumference at its base.

1794. A Kidney, the pelvis and calices of which are much dilated. Lying in the lower part of the former is a mulberry calculus the size of a small walnut; it sends a branch into one of the calices.

1795. A right Kidney, attached to the hilus of which, and completely surrounding the pelvis and the commencement of the ureter, is a tumour the size of a fist. The pelvis of the kidney is dilated, and contains two rough dark calculi,

one of which is spherical and the other branched. There were no other deposits present in the body.

From a woman, aged 53, who died in the Hospital 12th May, 1863, of cirrhosis of the liver. *P. M. Reg.*, vol. v, No. 1578; *Path. Soc. Trans.*, vol. xiv, p. 195.

1796. A Sacculated Kidney, in the pelvis of which is impacted a large irregular branched calculus of white colour and warty surface.

1797. A Kidney, the pelvis and calices of which are much dilated, and impacted in them is a branched calculus. In the recent state they contained pus.

The patient had undergone the operation of lithotomy five years before his death.

1798. A Kidney and upper part of its Ureter. The pelvis is much dilated, and contained a mulberry oxalate of lime calculus the size of a pigeon's egg, which lies in the bottom of the bottle. The kidney is studded with minute cysts.

From a man, aged 50, who died suddenly of cardiac disease.

CALCULI IMPACTED IN THE URETER.

1799.

1800.

CHANGES IN THE KIDNEYS AND URETERS SECONDARY TO OBSTRUCTION OF THE URINARY PASSAGES.

a. Obliteration or Obstruction of Ureter.

1801. A Kidney and the upper part of its Ureter. The pelvis and calices are greatly dilated, and the greater part of the renal tissue has been absorbed. The ureter is dilated sufficiently to admit the forefinger, and its walls are much thickened.

1802. A Kidney, sacculated, and with its pelvis greatly dilated and projecting from the hilus in the form of a conical thin-walled cyst. The renal tissue has almost entirely disappeared. The commencement of the ureter is not dilated.

1803. Half a left Kidney. Projecting from its convex border is a large thin-walled cyst the size of a fist, which contained a clear straw coloured fluid. In immediate contact with it and only separated from it by a delicate membrane is a dilated calyx. The other calices are not dilated, but the pelvis and commencement of the ureter are considerably so. The rest of the ureter was normal down to its termination, where it was involved in a cancerous mass.

From a woman, aged 78, who died October, 1860, of cancer of the mesentery. The right kidney had also one of its calices dilated and reaching to the surface, but there was no cyst present; the termination of its ureter was also involved in the cancerous mass. *P. M. Reg.*, vol. iv, No. 1142.

1804. A section of a Kidney, which is converted by dilatations of the pelvis and calices into a cyst retaining the size and form of the normal organ, partially divided by incomplete septa. No renal tissue remains.

1805. A right Kidney. Projecting from it are three large thin-walled cysts, varying in size from a walnut to an orange; they do not communicate with the calices. When recent they contained a milky fluid which became almost solid on boiling.

From a man, aged 68, who died of cancer of the rectum and pelvic glands 13th November, 1860. Both ureters were involved in the cancerous growth, and were constricted. The other kidney also presented several cysts. *P. M. Reg.*, vol. iv, No. 1154.

1806. Section of a Kidney of a child. The pelvis is greatly dilated. The calices are also much dilated, and encroach on the renal tissue.

1807. A Kidney, the pelvis of which is greatly dilated and projects from the hilum in the form of a conical cyst. The commencement of the ureter is greatly dilated. The calices are much enlarged, and encroach on the renal tissue.

1808. A right Kidney, which is reduced to one-fourth its normal size, and weighed only five drachms. It consists of an irregular cyst formed by dilatations of the calices; in one there was a calculus the size of a pea. The renal tissue has entirely disappeared. The corresponding ureter was constricted one inch above the bladder, so as only to admit of the passage of a bristle. The opposite kidney had undergone compensatory hypertrophy, and weighed eleven and a half ounces.

From a man, aged 46, who died in the Hospital February, 1862.
Path. Soc. Trans., vol. xiii, p. 143.

1809. Section of a Kidney, which is much enlarged, and when recent was of the same pale colour. The pelvis and calices are much dilated, and encroach on the renal tissue.

From a woman, aged 45, who died in the Hospital January, 1856, of cancer of the uterus, with infiltration of the base of the bladder and consequent obstruction to the ureters.
P. M. Reg., vol. ii, No. 432.

b. Obstruction to the flow of Urine from the Bladder.

1810. Section of a left Kidney. The pelvis and calices are much dilated, and encroach on the renal tissue.

From a case of stricture of the urethra.

1811. A section of a left Kidney. Projecting from its convex border at the upper end is a thin-walled cyst the size of a small orange. Separated from it by a thin membrane are dilated calices. Many minute cysts are scattered through the kidney, and one the size of a cherry is in a similar relation to another dilated calyx. The kidney possesses two pelves and ureters, which, especially the lower, are dilated. The ureters opened separately into the bladder, which was greatly sacculated (*vide* Series XXIX, No. 1735). The large cyst was filled with straw coloured serum. The other kidney presented no cysts, but the ureter and pelvis were dilated. The middle lobe of the prostate was enlarged, causing obstruction to the ureter.

From a man, aged 62, who died in the Hospital August, 1860, with ulcer of the duodenum and cardiac disease.
P. M. Reg., vol. iv, No. 1141.

1812. A Bladder and part of the Urethra, the right Kidney, and Ureter. Three inches from the external meatus is a tight stricture admitting a bristle, and a second one, also very narrow, at the bulb; behind this the urethra is much dilated, and is ulcerated through. The bladder is greatly hypertrophied; the ureter is dilated to the size of the small intestine, and the kidney sacculated.

From a man, who was admitted in a moribund condition, with extravasation of urine and gangrene of the scrotum.

PYONEPHROSIS.

1813. A Kidney. Its substance has been nearly absorbed in consequence of the ureter having been obliterated. This was followed by inflammation of the pelvis and infundibula and the formation of a large abscess. A portion of the duodenum adheres to the capsule of the kidney: a bristle denotes the ductus communis choledochus. The other kidney was not affected; the liver was cirrhotic, and there was a considerable amount of ascites.

1814. A left Kidney. In the lower part of the specimen the sacculated pelvis and remains of the renal tissue are visible. The upper part forms a thick-walled cyst the size of a cocoa-nut. Its inner surface is partly lined with lymph, and presents villous outgrowths.

The patient was a young lady, who noticed the tumour at the age of 13. It gradually increased in size, and at the end of nine years extended from the ribs to Poupart's ligament. It then fluctuated and showed signs of pointing. It was punctured, and seven pints of clotty sanguineous fluid were evacuated. The patient, who had previously suffered from attacks of hæmaturia, henceforth remained free from them, and the tumour was reduced to the size of a man's fist. A fistulous opening remained, giving vent to some ounces of fœtid pus daily. The patient lived for two years, and ultimately died with symptoms of renal disease. The other kidney, which had undergone compensatory hypertrophy, was found in state of fatty degeneration. The case was looked upon as one of ovarian disease.

Vide *Brit. Med. Jour.*, 6th June, 1868.

Presented by Dr. Cooper Rose.

SIMPLE CYSTS IN THE KIDNEY.

1815.

1816.

CYSTIC GROWTHS IN THE URETER.

1817. A Kidney and its Ureter. Numerous small cystic bodies are seen in the mucous lining of the ureter.

INTERSTITIAL NEPHRITIS WITH CYSTS.

1818.

CYSTIC DEGENERATION.

1819. A Kidney, which is considerably enlarged, but retains the normal shape. It is almost entirely made up of a congeries of cysts varying in size from a hazel nut downwards to those of microscopic size. The pelvis is not dilated.

1820. A Kidney, which is enlarged to three times its natural size, and is almost entirely made up of a congeries of cysts, varying in size from a walnut to a pin's head, separated from one another by narrow bands of renal tissue. The pelvis and ureter were not dilated. The normal shape of the organ is retained, but no distinction is visible between the cortex and medullary cones.

INFARCTUS.

1821.

Vide Series XIV, Nos. 1123, 1124, 1125.

MORBID GROWTHS, ETC.

1822. A left Kidney, bisected. Its pelvis is much dilated, and growing from the lining membrane at the lower part is a soft flocculent tumour the size of a walnut, composed of long, branched, delicate villous processes with clavate ends. Another similar tumour of small size is attached a little higher up, and isolated villi and small tufts are seen at various parts of the pelvis. The soft mass of which the base of the tumour is composed was found on microscopical examination to consist of compressed villi.

From a woman, aged 76, who died after an operation for strangulated hernia; she had suffered from albuminuria and repeated attacks of hæmaturia for two years.

Path. Soc. Trans., vol. xxi.

Presented by J. H. Roberts, Esq.

1823. A portion of a Kidney, presenting a medullary tumour with a well-marked alveolar fibrous stroma. At one point a melanotic patch is visible.

1824. A section of a left Kidney. The upper half is sacculated and atrophied, the lower is occupied by a globular medullary tumour surrounding a number of cysts formed by the dilated calices.

1825. A left Kidney. Involving its lower half is a cancerous tumour the size of two fists, partly surrounded by a narrow band of renal tissue. It weighed sixteen and a half ounces.

From a woman, aged 62, who died in the Hospital 7th January, 1856, of cancer of the left breast and secondary deposits in most of the internal organs. The right kidney was not affected.

P. M. Reg., vol. ii, No. 431.

1826. A left Kidney. Attached to it is a large oval lobulated tumour, measuring twelve inches in circumference. The tumour lies in a hollow in the kidney, and was invested by a continuation of its fibrous capsule, but is quite separate from the proper tissue of the kidney. When recent it was of soft medullary consistence, and of a pinkish-white colour. The kidney and attached tumour were furnished with a long mesentery, and were freely movable, and lay in front of the colon. On microscopical examination it was found to consist of round and oval nuclei about the size of blood corpuscles, with some delicate fibres and fibre cells.

The patient, a widow, aged 49, was admitted into the Hospital December, 1864, with all the signs of an ovarian tumour of four years' growth. An attempt was made to remove it, and the patient died of peritonitis.

Vide *Lancet*, 12th March, 1865.

1827. An enormous cancerous Tumour, springing from a left kidney. It measures thirty-three inches in circumference, and weighed thirty-one pounds. The growth appears to have sprung from the concavity of the kidney, and a narrow band of renal tissue can be traced round a great part of the circumference of the kidney. The pelvis of the kidney is greatly dilated. The ureter was normal, and yielded some clear urine. In the lower part of the tumour is a large ragged cavity, which contained eight pints of grumous fluid.

From a boy, aged 8, who died in the Hospital, 1856. The belly began to enlarge soon after birth. A cast of the child is preserved in the Museum. *Vide* Series XLII.

Path. Soc. Trans., vol. viii, p. 268.

1828.

ENTOZOA.

1829. A Kidney, the pelvis and calices of which are dilated, and contained some loose cysts resembling hydatids. These are suspended in the bottle.

1830. Hydatid Cyst from a human kidney, everted and proliferating.

1831. A portion of a Kidney, showing a cyst of the size of a walnut, with calcified walls (probably hydatid).

1832. A Kidney, whose pelvis is occupied by a hydatid cyst the size of a large orange. It contains numerous daughter cysts and large brood vesicles, which are adherent to the endo-cyst.

SERIES XXXI.

INJURIES AND DISEASES OF THE TESTICLE AND ITS COVERINGS, OF THE SPERMATIC CORD, VESICULÆ SEMINALES, AND VASA DEFERENTIA.

MALFORMATIONS.

1833. An undescended Testis, about the size of a filbert. It is devoid of epididymis and vas deferens. It lay within the abdomen, and was removed from the body of a gentleman who was the father of thirteen children.

Presented by J. W. Hulke, Esq., F.R.S.

INJURIES AND EFFECTS OF OPERATIONS.

1834. An undescended Testis, showing a large mesorchium.

From a man, on whom the operation for inguinal hernia was performed. The testicle was found in the canal, and as it was an impediment to the proper fitting of a truss it was removed.

Presented by Henry Morris, Esq.

DISEASES OF THE TUNICA VAGINALIS.

HYDROCELE.

1835. The Tunica Vaginalis, laid open, with the Testicles. The former is much dilated, forming a cyst the size of a pear; its walls are thickened. The testicle is of normal size.

1836. The Tunica Vaginalis, forming a cyst the size of an orange, at the bottom of which is seen the testicle, which has its tunica albuginea thickened.

Vide Specimen No. 1873.

1837. The Sac of a Hydrocele of the Tunica Vaginalis, associated with an inguinal hernia.

HÆMATOCELE.

1838. A Testis and its Coverings. The tunica vaginalis is much dilated, and its cavity nearly filled by a firmly coagulated blood clot of oval shape five inches in long diameter. The upper part is partially decolorised by the subsidence of

the blood discs. The testicle is healthy. Processes of fibrin pass between the coagulum and the sac.

From a man, aged 49, who was tapped for hydrocele of a month's standing. Clear serum escaped. In two hours the swelling was as large as before. Two days afterwards he was admitted into the Hospital. He was the subject of heart disease, of which he died at the end of a month. Six ounces of bloody fluid escaped when the tumour was opened.

1839.

EFFECTS OF INFLAMMATION.

1840. A Testis and its Coverings. The tunica vaginalis is dilated and its walls thickened. Its lining membrane is covered with masses of organised lymph, which form dendritic and papillary growths. The testicle is normal.

LOOSE BODIES IN THE TUNICA VAGINALIS.

1841.

DISEASES OF THE TESTICLE AND EPIDIDYMIS.

ATROPHY.

1842.

EFFECTS OF INFLAMMATION.

1843.

FUNGUS TESTIS.

1844.

SYPHILITIC DISEASE.

1845. A Testicle, bisected. It is much enlarged, and its substance occupied by several opaque, yellow, cheesy nodules the size of filberts, separated by fibrous tracts.

The larynx of the same case is preserved in the Museum, Series XVII, No. 1205.

TUBERCULAR DISEASE.

1846. A Testicle, enlarged and somewhat nodulated; the section presents an opaque yellow infiltration, in places softening down.

From a native of the East Indies, who had long suffered from rheumatic gout. He was admitted into the Hospital for scrofulous abscess of the testicle, and died February, 1852. The deposit in the testicle on microscopical examination presents the characters of tubercle. There was no tubercle of the lungs.

1847.

1848. A Testis, with a portion of the Integument of the Scrotum. The testis is much enlarged, and converted for the most part into an opaque yellow, somewhat friable tissue. Where the skin is preserved it is seen to be ulcerated, with the scrofulous matter exposed on the floor of the ulcer. The testicle was removed by operation.

Presented by T. W. Nunn, Esq., March, 1866.

1849. A section of a Testicle and Epididymis. The latter is much enlarged from numerous opaque yellow tubercular deposits in its substance, its head is entirely occupied by two larger deposits of similar character with their centre softened into cavities. The testicle is normal.

1850. Sections of both Testicles. The upper is much enlarged, measuring upwards of four inches in its long axis. It is infiltrated with opaque yellow friable matter, and its lower part is softened down into large scrofulous abscesses. The lower one is less enlarged, but similiarly infiltrated. Two scrofulous abscesses are present in the epididymis.

There were also tubercular abscesses in the prostate and vesiculæ seminales, which are preserved in the Museum, Series XXVIII, No. 1717.

MORBID GROWTHS.

ENCHONDROMATA.

1851.

Vide Specimen No. 1860.

FIBROUS AND FIBRO-CYSTIC TUMOURS.

1852.

SARCOMATA.

1853. A section of a left Testicle and Cord. It forms a nodular pyriform tumour the size of half a cocoa-nut. In the recent state the testicle weighed one pound. The cord is greatly thickened, its section being nearly two inches in diameter. Both testicle and epididymis, which remain distinct, are converted into sarcomatous tissue which extends along the cord. On microscopical examination the morbid condition was found to consist of an intertubular growth, composed chiefly of oval nucleated cells larger than blood corpuscles, with a few cells and fusiform fibres. The seminal tubes were still to a great extent visible, but were separated by the new growth, and their contents were in a state of fatty degeneration. The other testicle was similiarly affected.

From a man, aged 57. The left testicle became affected three months after the right. Both testicles were removed by operation, the right fourteen months after the first appearance of the disease, the left fifteen months. The patient made a good recovery.

Reported, with drawings, in *Path. Soc. Trans.*, vol. xvii, p. 180.

Presented by J. W. Hulke, Esq., F.R.S.

1854.

CANCER.

1855. A Testicle, bisected. It is enlarged to the size of a cocoa-nut, slightly lobulated, and entirely converted into a mass of medullary tissue. It was very vascular, and contained several extravasations, which now present the appearance of irregular cysts. The mass is entirely enclosed by the tunica vaginalis.

1856. A right Testicle, laid open. It formed an extremely vascular tumour, the size of a cocoa-nut. The section presents an interlacing fibrous stroma, with the meshes filled with medullary matter.

From a man, aged 35, whose testicle was removed by Mr. De Morgan, May, 1859. Twelve months previously he had received a severe blow on the testicle, after which he remained subject to darting pains. Six months after the blow the testicle began to enlarge. The patient made a good recovery, but died six months after his discharge of cancer of the lumbar glands.

Surg. Reg., vol. vi, No. 243.

1857. A Testicle, laid open. It is greatly enlarged, and consists of medullary matter contained in the meshes of a fibrous stroma. The posterior part is ragged and softened. The sac of the tunica vaginalis is obliterated except for a small space at the top of the testicle.

Presented by R. Cartwright, Esq.

1858. A right Testicle, laid open and injected, forming an oval tumour the size of a goose's egg. The section presents a congeries of more or less distinct round nodules of medullary tissue separated by vascular fibrous bands.

From a man, aged 37, married, healthy, and with a family. He stated that the right testicle had always been smaller than the left, and after a blow had become so small that he could not perceive it. Two years before its removal, July, 1850, it began to enlarge, and he now received another severe blow upon it. This was followed by much swelling, which again partially subsided, but soon after returned and continued to increase in size up to the time of his admission into the Hospital. He made a good recovery, but a year afterwards there were symptoms of the presence of disease in the abdomen.

1859. A section of a Testicle, which is greatly enlarged, and infiltrated with medullary cancer. In places the cancerous mass is softened down, and presents cavities filled with coagula. The epididymis is similarly infiltrated.

1860. A right Testicle laid open. It is enlarged to the size of a goose's egg. The section presents a fibrous meshwork filled with medullary matter. The tunica vaginalis is normal. At one point beneath the mediastinum is a small nodule of cartilage.

From a man, aged 25, whose testicle was removed by Mr. James Arnott. The disease was of twelve months' duration. He made a good recovery.

1861. A Testicle, laid open. It is enlarged to twice or three times its natural size. In the centre of the body is a large irregular cavity with ragged walls, from which sprout villous processes. This cavity is partially filled with blood clot; the tissue surrounding it was found to consist of collapsed and empty tubules. The lower part of the testicle presents the characters of medullary cancer. The epididymis is much thickened, and on microscopical examination presented a dense fibrous stroma containing in its meshes cells of varied form.

From a man, aged 50, whose testicle was removed by Mr. Campbell De Morgan, in January, 1849. The disease had existed several months. The patient recovered from the operation, but in a few months the disease returned in the groin, the cervical glands, and apparently in the lungs and other internal organs.

1862. A Testicle, which was removed by operation. It is enlarged to the size of an orange, and infiltrated with medullary cancer, and contains numerous small cysts with distinct smooth walls.

From a man, aged 25. The disease returned in the cord three months after the operation.

Presented by J. R. A. Douglas, Esq.

1863. A Testicle, with part of the Scrotal Integuments, removed by operation. It is much enlarged, and infiltrated with cancer. The integuments are also greatly thickened by cancerous infiltration.

1864. A section of a left Testicle. It is much enlarged and nodulated, and the cut surface presents white fibrous bands dividing the organ into rounded spaces filled with soft yellow tissue, which was found on microscopical examination to consist mainly of rounded nucleated cells.

From a man, aged 38, whose testicle was removed by Mr. De Morgan in May, 1869. The tumour had existed for twelve years. There was also a cancerous tumour in the abdomen. He died one month after the operation.

Reported in *Path. Soc. Trans.*, vol. xx, p. 250.

1865. A left Testicle, partially invested by a pouch of peritoneum, which is enormously thickened. The testicle is greatly enlarged, and entirely converted into a mass of soft cancer. The epididymis is also enlarged and cancerous.

From a man, aged 50, whose left testicle had remained in the inguinal canal, and was removed by Mr. Arnott in July, 1870. Fifteen months previously he had received a severe blow on the perineum by being butted by a calf, and soon after the testicle became swollen and tender. The patient made a good recovery.

Reported, with a description of the microscopical characters, in *Path. Soc. Trans.*, vol. xxii, p. 182.

1866. A right Testicle, bisected, enlarged to the size of a large pear. The normal structure is entirely replaced by soft vascular new growth.

CYSTS CONNECTED WITH THE TESTICLE AND EPIDIDYMIS.

1867.

1868. A right Testicle, laid open. It forms a nodular nearly globular tumour, five inches in diameter, which is composed of a congeries of cysts, varying in size from a pea to a small walnut. Some of them contain small solid growths; others secondary cysts. The cysts are separated by fibrous septa, which contain small nodules of cartilage. The cysts are lined by epithelium, and in the recent state some were filled with clear straw coloured fluid, others with grumous matter stained with blood.

From a groom, aged 35, who bruised his testicle against the pommel of his saddle; this was followed by great swelling and ecchymosis, which subsided in two months, leaving however the testicle hard. It soon began to enlarge again, and was tapped two or three times, giving exit to blood, and was afterwards laid open by incision. Eight months after the accident he was admitted into the Hospital 7th November, 1867, and the testicle removed by Mr. De Morgan. He made a good recovery.

Reported in *Path. Soc. Trans.*, vol. xviii.

ENCYSTED HYDROCELE.

1869. A Testicle and its Covering. Situated above and at the back of the testicle are several cysts, varying in size from a bean to a walnut. They communicate with one another, but not with the tunica vaginalis. They contained spermatozoa. The other organ was in a similar condition.

PEDUNCULATED BODIES ATTACHED TO EPIDIDYMIS.

1870.

DISEASES OF THE SPERMATIC CORD.

CYSTS.

1871.

HÆMATOCELE.

1872.

HYDROCELE.

1873. A Testicle and Spermatic Cord. There are two cysts seen; the lower is formed by the dilated sac of the tunica vaginalis. The upper, which is the larger, and is protruded into the cavity of the lower, is formed in the tissue of the cord.

VARICOCELE.

1874. A Testicle and Cord. There is considerable enlargement and dilatation of the spermatic veins, together with an increased formation of fibrous tissue.

Taken from the body of a man who died after amputation for compound fracture.

TUMOURS.

1875.

DISEASES OF THE VESICULÆ SEMINALES AND VASA DEFERENTIA.

1876. A Bladder, with the Prostate Gland and Vesiculæ Seminales. The vesiculæ seminales are dilated, and small calculi are seen lying in the sacculi. The prostate is considerable enlarged. There is a well-marked projection of the "third lobe" in the middle line.

1877.

SERIES XXXII.

DISEASES OF THE VAGINA AND EXTERNAL ORGANS OF GENERATION IN THE FEMALE.

MALFORMATIONS.

1878.

HYPERTROPHY OF THE CLITORIS AND NYMPHÆ.

1879. One of a pair of enlarged Nymphæ, removed by operation.

From a female, aged 24, wife of a sweep. She had been married five years. The enlargement had progressed for four years.

Presented by J. R. A. Douglas, Esq., September, 1861.

1880. A Labium, greatly hypertrophied. It forms an irregular oval mass the size of a hen's egg. The surface is tuberculated. It was apparently attached by a thick pedicle, and has been removed by operation.

1881. The Labia, enormously hypertrophied and forming tuberculated masses. There are deep interstices between the warty looking growths which form the tumour.

1882. A Clitoris, enlarged to the size of a small orange, and presenting a rough tuberculated surface anteriorly, but flattened posteriorly. It is still attached to the surrounding parts.

1883. An enormously hypertrophied Clitoris, removed by operation.

Presented by Andrew Clark, Esq.

1884. A Clitoris, whose prepuce has undergone excessive hypertrophy. The cut surface of the base of the tumour shows the true structure of the clitoris, which becomes lost in the fibro-cellular tissue of which the growth is mainly composed. It weighs four pounds.

From a woman, aged 54. The tumour had been growing for seventeen years. It was excised by Mr. Shaw.

Reported in *Med. Times and Gazette*, 27th November, 1852.

PAPILLOMA.

1885. A Labium, showing an irregular warty growth.

Vide Nos. 1879, 1881.

FIBROUS AND FIBRO-CELLULAR TUMOURS.

1886. Tumours from the Labia. The lower one is from the labia majora, and consists of hypertrophied skin and cellular tissue. The surface was covered with flat warty tubercles. The upper specimen is from the nympha of the same side; it is greatly hypertrophied.

Presented by Dr. Priestley.

Vide Specimens Nos. 1880, 1883.

CANCER.

1887. A Labium, showing a cancerous nodule. It was removed during life.

1888. A large warty Carcinomatous Growth, removed from the labium.

1889. The external Organs of Generation and surrounding Skin, showing extensive cancerous ulceration. The right labium is partly and the left entirely destroyed. The disease has encroached on the nymphæ and buttock. There is a large mass of cancerous inguinal glands on either side.

1890.

CYSTS.

1891.

URETHRAL TUMOUR.

1892.

POLYPI OF THE VAGINA.

1893. A small heart-shaped Polypus, removed from the vagina.

Presented by Dr. Hall Davis.

TUMOURS OF UNCERTAIN NATURE.

1894. A rounded Tumour the size of a walnut, removed from the nymphæ.

BLOOD CLOT FROM THE VAGINA.

1895. A large polypoid Blood Clot, removed from the vagina of a maiden lady.

Presented by J. R. A. Douglas, Esq., of Hounslow.

SERIES XXXIII.

DISEASES OF THE UTERUS AND ITS APPENDAGES.

MALFORMATIONS.

1896. A Uterus, with its Appendages and the Vagina. There is a complete septum extending from the fundus of the uterus to the termination of the vagina, dividing the cavity into two parts, of which the right is rather the larger.

Vide Series XLII, No. 205.

1897. A Uterus and its Appendages. The ovaries are smooth, and free from cicatrices, and the uterus is very small: its length is two inches, its breadth at the fundus one and three-quarter inches.

From a woman, aged 18, who had never menstruated. She died with extensive embolism and thrombosis of large arteries.

1898. A Uterus and Appendages, healthy in structure but of remarkably small size. The ovaries are small and perfectly smooth. From a woman who never menstruated.

ANTEFLEXION.

1899. The Pelvis of a Monkey. The bones show marked deformity due to rickets, the transverse diameter being much diminished. The falling in of the bones by contracting the pelvic space has forced the bladder upwards; and it is now seen overhanging the symphysis pubes. The uterus is also displaced upwards, and acutely anteflexed near the central point of the body.

Presented by J. B. Sutton, Esq.

1900.

RETROFLEXION.

1901. A Uterus, which is acutely retroflexed. The canal of the cervix appears to be obliterated at two points; this appearance may possibly be due to the section not having been made exactly in the middle line.

ANTEVERSION.

1902.

RETROVERSION.

1903.

PROLAPSE.

1904. The external Organ of Generation, with the Pubic Arch and the Uterus. The os and cervix uteri are enormously hypertrophied; the former projects at the external orifice of the vagina, and there is evidence of ulceration around it. The labia on the right side are ragged as if from ulceration.

Vide Series XLII, Nos. 199, 202, 203.

INVERSION.

1905. The inverted fundus of a Uterus, which was removed by operation. The cavity formed by the inversion is seen to be lined with the peritoneum, and contains part of the ligaments.

From a woman, aged 22, in whom the uterus had become inverted during parturition, causing frequent hæmorrhage. She came under treatment at the Hospital twelve months after the accident, when the inversion was found to be irreducible. The specimen was removed with the écraseur: she made a good recovery.

Presented by Dr. Hall Davis.

Vide Nos. 2064, 2065.

ADHESION OF THE UTERUS TO THE SURROUNDING STRUCTURES.

1906.

RESULTS OF INFLAMMATION.

DYSMENORRHŒAL MEMBRANE.

1907. A Uterus and its Appendages, injected. The cavity is partly lined by a thick white false membrane. The organs are highly vascular.

From a woman who died during dysmenorrhœa.

PYOMETRA.

1908.

ULCERATION OF THE OS AND CERVIX UTERI.

1909.

Vide Nos. 1911, 1955, 1956, 1963.

ATRESIA OF THE CERVIX.

1910. A Uterus and its Appendages. The os is so narrow as barely to admit a bristle. The ovaries are enlarged.

HYPERTROPHY OF THE CERVIX.

1911. The Uterus and its Appendages. The former is more than twice its natural thickness, and its walls are occupied throughout by numerous cells or canals, which give it a spongy appearance. The os is ulcerated.

From a patient who died of aneurism of the aorta.

1912.

CYSTS IN THE CERVIX.

1913. A Cyst, which was removed from the os uteri. The walls are thick and dense; the interior is smooth. At its base are some smaller cysts, seen in section. These cysts are probably enlarged glandulæ Nabothii.

1914. A Uterus and its Appendages. The os and cervix are honeycombed by cysts, varying in size from a millet seed to a small bean. Some are situated near the surface, others are completely embedded in the muscular tissue.

CHRONIC METRITIS AND ENDO-METRITIS.

1915. A Uterus and its Appendages. The former is much enlarged, its cavity dilated, and the mucous membrane of both body and cervix thickened and rugose.

Vide Nos. 2068–2072.

TUMOURS AND ALLIED MORBID GROWTHS.

MUCOUS POLYPI.

1916. The Uterus of an aged woman. Attached to the mucous membrane of the fundus and cervix are several small mucous polypi.

1917. A Uterus and its Appendages. Attached to the canal of the cervix is a small mucous polypus. In the wall of the cervix close to the os internum is a cyst the size of a large pea.

1918. A Uterus, containing two Polypi. One attached close to the os internum, pyriform in shape, the size of a small walnut, is a fibrous polypus. The other, almost sessile, of smaller size, attached to the os externum, is a mucous polypus.

1919. A Uterus and its Appendages. Attached by a narrow pedicle to the posterior wall of the uterus, and thence passing upwards towards the fundus uteri, is a flattened mucous polypus. There are two similar growths near the fundus. The walls of the uterus, and the cervix are considerably thickened, and in the left wall there is a fibroid tumour the size of an olive.

FIBROID POLYPI (Fibro-Myomata).

1920. A large fleshy Polypus with a shaggy villous surface, said to have been removed from the uterus.

1921. A lobulated Fibroid Polypus, the size of an orange, which was attached by a narrow pedicle to the cervix, and was removed by operation. An extravasation of blood has taken place into one part of the tumour.

Presented by Mitchell Henry, Esq.

1922. A nodulated Fibroid Tumour of the Uterus, the size of an orange, which hung down as a polypus, and was removed.

Presented by Dr. Priestley.

1923. Half of a Fibroid Tumour of the Uterus, the size of a small cocoa-nut, which hung down as a polypus and caused much flooding. It was removed by operation.

Trans. Obstet. Soc., vol. x.

Presented by Dr. Hall Davis.

1924. A Fibroid Polypus of the Uterus, the size of a large cocoa-nut, of a somewhat pyriform shape, and with a thick pedicle.

It was removed by Dr. Hall Davis.

1925. A pedunculated Fibroid Tumour of the Uterus, the size of a fœtal head at the full period. The short pedicle by which it was attached is seen in front.

The diagnosis was rendered difficult, because the tumour completely filled the pelvis, so that the hand could not pass beyond to ascertain its attachments. It could however be rotated, and thus was proved to be pedunculated.

Presented by Dr. Priestley.

1926. A Uterus and its Appendages. Attached to the uterus are several fibroid tumours, some intra-mural, others pedunculated and sub-peritoneal. In the upper part of the bottle is a detached one of much larger size, which hung down into the cavity of the uterus, its pedicle remaining *in situ*.

It was removed with an écraseur by Mr. Hulke.

1927. Fibroid Polypus of the Uterus, the size of an orange, with a narrow pediele, which was removed by operation.

1928. A thin section of the preceding specimen, showing it to be composed of fine wavy fibrous bundles.

1929. An oval Fibroid Polypus of the Uterus, removed by operation.

1930. A Uterus and its Appendages. Embedded in the wall of the uterus are several fibroid tumours, one of which projects as a polypus into the dilated cavity.

1931. A Uterus and its Appendages, showing a large fibro-myoma situated in the substance of the left wall. The growth has produced considerable lengthening of the uterine canal.

1932. An Intra-Uterine Fibroid Polypus, bisected. It is pear shaped, and its cut surface shows well the whorled structure of the fibrous bundles composing it.

It was removed by the écraseur December, 1877, from a single lady, aged 44. She was blanched and exhausted by hæmorrhage, which was most profuse at the very frequent menstrual periods. In 1878 she was in good health, and the hæmorrhage had not recurred.

Presented by Dr. Hall Davis.

FIBRO-MYOMATA.

1933. A Uterus. Attached by a thick pedicle to the posterior part of the fundus is a large fibroid tumour. A section of the growth shows the whorled arrangement of its fibrous structure.

1934. A Uterus, injected. Embedded in the wall of the uterus, and projecting into and filling up the cavity of the fundus, is a small fibroid tumour. It is invested by the mucous membrane of the uterus. The injection has not penetrated it.

1935. A Uterus, with a large Fibroid Tumour, bisected. The uterine wall is stretched over the tumour, which measures five inches in long and three and a half inches in its short axis, and is distinctly lobulated.

1936. A Uterus and Ovaries. Growing from the fundus uteri, and projecting into its cavity and the upper part of the vagina, is a fibroid tumour the size of a fist, of dumb-bell shape, the constriction corresponding to the os internum. The upper part of the vagina is much dilated, and its posterior wall bulged backwards.

1937. A Uterus and its Appendages, injected. Embedded in the wall of the Uterus, and projecting from its outer surface, are several large globular fibroid tumours. Springing from the fundus and projecting into the cavity is a small polypoid growth.

1938. Half of a Uterine Fibro-Myoma, contained in a smooth serous capsule, which is at one spot marked by a small pedicle.

1939. Section of a Fibroid Tumour of the Uterus, removed by operation.

1940. A Uterus, containing several fibroid tumours. Some are embedded in the wall, others projecting externally and into its cavity.

From a patient who died after an operation for strangulated hernia.

1941.

1942.

SARCOMATOUS DEGENERATION OF FIBRO-MYOMATA.

1943.

CALCAREOUS DEGENERATION OF FIBRO-MYOMATA.

1944. A Uterus and its Appendages. Embedded in and projecting from the posterior wall of the fundus is a calcified fibroid tumour the size of a billiard ball; it is invested by a distinct capsule. It caused no symptoms.

1945. A Uterus and its Appendages. Growing from the anterior wall is a large fibroid tumour; its cut surface presents several small calcareous deposits. Similar tumours of smaller size exist in other parts of the uterus and in the site of the right ovary.

1946. A Uterus laid open. Embedded in its fundus are two calcified tumours, the larger equal in size to a small orange. It caused great irritation during life by pressing on the bladder.

1947. Half of a Fibro-Myoma of the Uterus, measuring seven inches by four inches, which has undergone complete calcareous degeneration. Attached to its upper surface is a portion of another, but much smaller growth, which has undergone a like change.

1948. The fibrous framework of a Uterine Tumour, measuring six and a half by five inches, which has undergone complete calcareous degeneration. There are hollow spaces in its interior.

DIFFUSE HYPERTROPHY.

1949. A Uterus and its Appendages. The former is more than twice its natural thickness, and the walls are occupied by numerous canals, which give a spongy appearance to the section.

From a woman who died with a large aneurism of the transverse aorta.

Presented by Dr. West.

1950. A Uterus with its Appendages, and the Vagina. The vaginal and uterine cavities are greatly dilated, their walls thickened, and the mucous surfaces eroded. Near the fundus uteri is an ulcerated spot, possibly the site of attachment of a polypus.

TUBERCULAR DISEASE OF THE UTERUS.

1951. A Uterus and Vagina, laid open. The cavity of the uterus is enlarged, and presents a ragged interior, due to the infiltration of tubercular matter into the uterine walls and its subsequent softening.

SARCOMA.

1952.

CYSTO-SARCOMA.

1953.

CANCER OF THE CERVIX.

1954. A section of a Uterus and Vagina. The os and cervix are partially destroyed by ulceration, which is bordered by a thin layer of cancerous infiltration. The upper part of the vagina is covered by a thin cancerous growth.

1955. A Cervix Uteri, with cauliflower excrescences growing from its posterior lip. The mucous membrane around the os showed ulceration.

From a woman otherwise healthy.

CANCER OF THE CERVIX AND BODY.

1956. A Uterus, laid open. The os has been destroyed by ulceration, which extends along the mucous surface of the lower half of the body of the uterus, and also over the upper part of the vagina. The ulcerated surface is ragged, and studded with villous outgrowths. The cancerous infiltration of the margin of the ulcer is scarcely perceptible.

1957. A Uterus, Bladder, and Vagina. The os uteri has been almost destroyed by ulceration, which extends along the mucous surface nearly as high as the fundus, and involves all the upper part of the vagina. The ulcerated surface is studded with soft white cancerous nodules. Similar nodules are seen on the floor of the bladder.

1958. A Uterus and its Appendages, with the Vagina and Bladder. The os and cervix uteri have been destroyed by ulceration, the margins of the ulcer presenting a very narrow line of cancerous infiltration. The upper part of the vagina is extensively ulcerated, and presents ragged cancerous outgrowths. The ulceration involves the floor of the bladder, and there is a communication between it and the vagina the size of a half crown piece. Scattered over the outer surface of the uterus, and also on the mucous membrane of the vagina below the cancerous ulceration, are several black spots resembling deposits of melanotic cancer.

1959. A Uterus and its Appendages, with the Vagina and Bladder. The anterior lip of the os uteri has been destroyed by cancerous infiltration, which extends over the whole of the upper half of the vagina, and involves the base of the bladder. There is an opening between the vagina and bladder the size of a crown piece. The ulcerated surfaces are covered by ragged warty outgrowths of cancer. The rest of the uterus is normal. On the left of the uterus is a chain of pelvic glands enlarged and infiltrated with cancer.

1960. A Uterus, Vagina, Bladder, and adjacent parts. The os and cervix uteri have been destroyed by ulceration. The bladder and vagina are involved in an enormous partly softened and disorganised mass which filled up the pelvis. The interior of the bladder and vagina present a mass of shreddy, villous, and nodular outgrowths, and there is a fistulous communication between them.

1961. The Pelvic Viscera, with neighbouring coils of Small Intestine. There is extensive cancerous ulceration of the os and cervix uteri, the upper part of the vagina and the base of the bladder. A large fistulous opening exists between the two latter. The ulcerated parts are in a shreddy gangrenous condition, and the gangrene has extended to the broad ligaments of the uterus and to the neighbouring coils of intestine, both large and small, which present several large ragged perforations.

1962. A Uterus, Vagina, and Bladder. The parts are infiltrated with cancer. There is a large communication between the vagina and bladder due to ulceration.

1963. A Uterus. There is a large deposit of scirrhous cancer in its walls, affecting more extensively its posterior wall. The adjoining parts of the bladder and vagina are similarly affected. The cervix uteri is ulcerated.

1964.

1965.

EXCISION OF THE UTERUS.

1966. A Uterus, enclosing an enormous fibroid tumour measuring twelve inches by nine inches. The walls of the uterus are much hypertrophied, measuring nearly half an inch in thickness.

From a woman, aged 42, a native of Poland. She had been married twenty-two years, but had never been pregnant. The abdomen was observed to be enlarging in January, 1881, but she had no pain or menorrhagia until a few weeks before her admission in September, 1881. The tumour and the uterus containing it were removed by abdominal section on 24th October, 1882. Hæmorrhage occurred from the pedicle on the 27th, when the peritoneal cavity was laid open and the clots removed. The patient recovered, and at this date (August, 1884) is alive and well.

Presented by Andrew Clark, Esq.

Vide the *Lancet*, 1882, vol. ii, p. 45.

1967. A Uterus and its Appendages affected with cancer of the cervix. Excision was performed during life at the urgent request of the patient. Death occurred shortly after the operation from peritonitis.

Presented by Henry Morris, Esq.

1968. A Uterus and its Appendages affected with cancer of the cervix, involving also the upper part of the vagina. The uterus was excised during life. The patient survived the operation a few hours only.

Presented by Henry Morris, Esq.

1969.

DISEASES OF THE UTERINE APPENDAGES.

CYSTS CONNECTED WITH THE FALLOPIAN TUBES.

1970. An Ovary, with the Broad Ligament and Fallopian Tube. The ovary is divided, and appears to be small and shrivelled. Near the distal end of the Fallopian tube there is a cyst the size of an olive; within it, attached to the wall, are numerous papillary growths. The tube, which is dilated, has been laid open.

DROPSY OF THE FALLOPIAN TUBES.

1971. A Uterus and the surrounding structures. There is a fibroid tumour the size of a chesnut situated in the wall of the cervix uteri, just above the os externum. Both Fallopian tubes are distended with fluid, forming two sausage-shaped tumours, which pass behind the uterus and are adherent to the posterior surface of the body of the organ. Both ovaries are enlarged.

TUBERCLE OF THE FALLOPIAN TUBES.

1972. 1973.

1974.

ABSCESS IN THE BROAD LIGAMENT.

1975. A Uterus and its Appendages. Attached to the right side and posterior surface of the uterus is a thick-walled sac, probably that of an abscess, the size of a small orange, with a ragged interior. The Fallopian tube, thickened and dilated, is seen passing over the outer and posterior aspect of the sac. The sac communicates with the rectum through a sinus situated about three inches from the anus. The mucous membrane below the opening is ulcerated.

FIBROUS TUMOURS CONNECTED WITH THE BROAD LIGAMENT.

1976.

CYSTS CONNECTED WITH THE BROAD LIGAMENT.

1977. The Ovaries and Broad Ligaments, showing cysts unconnected with the ovary or Fallopian tubes, and formed by dilatation of the tubules of the Par-ovarium, which persist in the meso-salpinx immediately above and in connection with the ovary. In the upper preparation the cyst is sessile, in the lower the cysts are pedunculated, and attached just below the fimbriæ of the Fallopian tube.

Presented by Dr. Priestley, 1860.

1978. The left half of a Uterus and its Appendages, showing a cyst situated in the broad ligament.

SERIES XXXIV.

DISEASES OF THE OVARIES.

1979.

ABNORMALITIES.

1980.

Vide No. 1983.

DISPLACEMENTS.

1981.

ATROPHY AND FIBROUS DEGENERATION.

1982.

Vide No. 1983.

HYPERTROPHY.

1983. A Uterus and its Appendages. The left ovary is seen in section, much enlarged. The right one is much atrophied or congenitally small. The mucous membrane of the uterus is injected.

From a patient who died with hydrothorax four weeks after delivery.

CYSTIC TUMOURS OF THE OVARY.

1984. A Uterus, with the Ovaries, laid open, showing the early stages of multilocular cystic growth.

Presented by Dr. Priestley.

1985. A Cyst attached to an Ovary.

Presented by F. Samwell, Esq.

1986. An Ovary. It is enlarged to about the size of a goose's egg, containing numerous cysts. The other ovary was healthy.

From a woman, aged 21, who died from the effects of a large carbuncle. She had been delivered of a child eleven months previous to her death.
P. M. Reg., 1853, No. 6.

1987. A multilocular Cyst from the ovary, dried, showing the independent origin of the individual cysts, which are not the result of endogenous growth from a parent cyst.

Presented by Dr. Priestley.

1988. A similar preparation to the preceding. The cysts are fewer in number, but of larger size.

Presented by Dr. Priestley.

1989. A Uterus and its Appendages. The ovaries are somewhat enlarged, and a simple cyst is attached to the right one.

Presented by T. W. Nunn, Esq.

1990. A Cyst from the Ovary. It has a broad adhesion to the uterus, its walls are thickened; on its internal surface some calcareous matter is seen.

1991. A large simple Cyst, dried. It grows from the left ovary. The lower part is constricted by the pelvis, and adheres to the back of the uterus and bladder. The upper part is large and expanded, and is partly ossified.

DERMOID CYSTS.

1992. An Ovary. It contains a number of cysts which communicate with one another. In the interior there were found a fatty mass, enveloped in skin, a portion of bone, and some teeth.

From a virgin.

1993. A Cyst, partly ossified, lined with steatomatous matter; it contained the hair seen below and a portion of bone with three teeth in it perfectly formed.

From an ovary.

1994. Fragments of Bone with well-formed teeth from an ovarian cyst.

Presented by Dr. Hall Davis.

1995. A Uterus and Appendages. Growing from the left ovary there is a large thin-walled dermoid cyst containing hair and some calcareous matter.

1996. A Uterus and Ovaries. The left one is transformed into a large cyst with tough fibrous walls. Growing in the interior is a large fleshy mass riddled by cysts containing in their walls teeth, hair, and fragments of bone.

Vide *Path. Soc. Trans.*, xviii, p. 190.

1997.

PAROVARIAN CYST.

1998.

ENTOZOA.

1999.

SOLID TUMOURS OF THE OVARY.

2000. A Uterus and Ovaries. In the right ovary is a large cyst, with a medullary cancerous growth from its inner surface.

2001. A Uterus and Ovaries. The latter are enlarged and converted into cysts which are nearly filled with medullary tissue. The uterus is covered with recent lymph.

2002. A Uterus and Ovaries. The former contains a small fibrous tumour near the fundus. The latter are greatly enlarged, consisting of a number of cysts containing soft medullary matter.

From a patient, aged 48, who had scirrhus of the breast and secondary cancer of many of the viscera.

P. M. Reg., 1853, No. 59.

2003. Portion of a Cyst from an Ovary. Its walls are of unequal thickness. Numerous soft medullary tumours are growing from its inner surface; one of these has attained to a considerable size, and presents a loose shreddy surface. Above is another mass probably of similar nature but composed of many small pedunculated tumours.

2004. A Uterus and its Appendages in section. The right ovary is the seat of a very large and partially solid multilocular growth, which has been injected. There is a small cystic enlargement of the left ovary. There is a large calcified fibroid tumour connected with the fundus of the uterus.

Presented by Dr. Rogers.

2005. Portion of a Fibrous Tumour with its outer layers calcified. From an ovary.

Vide *Path. Soc. Trans.*, vol. viii.

Presented by T. W. Nunn, Esq.

2006. A Uterus with the Ovaries. Both ovaries are much enlarged, and present a nodulated exterior. On section the growths are seen to be almost solid and of fibrous consistence. There is a smooth-walled cyst in the right ovary.

Presented by Dr. Hall Davis.

2007. A Uterus and its Appendages. In the substance of the right ovary there are two rounded melanotic growths the size of large peas. There are no deposits in the uterus, but the peritoneum forming the broad ligament is deeply stained. In the bottom of the bottle there is a portion of the liver from the same case.

For the head of the humerus and a portion of the skull, *vide* Series V, No. 572.

2008. 2009.

2010.

SERIES XXXV.

DISEASES OF THE OVUM AND ITS MEMBRANES.

MYXOMATOUS DISEASE OF THE CHORION (so-called Hydatids).

2011. The specimen consists of a solid growth of a yellowish colour (the chorion), with innumerable white vesicles of varying size (the villi) growing from it. The larger cysts are shrunken, and to many groups of smaller vesicles are adherent. Most of the larger growths are attached by delicate pedicles to the main mass.

From a woman, aged 25, who had given birth to one child. The uterus was supposed to be enlarged from the presence of a tumour. Hæmorrhage occurred, and this mass was discharged.

Presented by Dr. Hall Davis.

2012. A similar specimen

2013. A Uterus, laid open in front. It is much enlarged, and the walls are thickened. Growing from the fundus and filling the uterine cavity is a large mass, produced by myxomatous degeneration of the chorion, some portions of which hang through the os uteri. A fibro-myomatous tumour is seen in section in the right wall of the uterus.

2014. Portions of a similar growth, which were discharged during life, their expulsion having been preceded by frequent abortions.

2015. The Membranes of a Twin Gestation. Here and there the terminations of the villi of the chorion present myxomatous degeneration in an early stage.

They were removed partly by forceps and partly by the injection of water on the tenth day after the expulsion of the fœtuses. No putrescency had occurred, but there was copious hæmorrhage.

Presented by Dr. Hall Davis.

DISEASES OF THE PLACENTA.

2016. A Fœtus, at the fourth month. Attached to the placenta, on the uterine surface of the latter, there is an exudation of lymph.

2017. A Twin Abortion at the fourth month of pregnancy. There is a thick yellow exudation on the uterine surface of the membranes.

2018. A portion of a Placenta. Blood appears to have been effused in its substance, and lymph on the uterine surface On its fœtal surface there are some deposits of a calcareous nature.

2019. A small Placenta with Fœtal Bones in its substance; blood also appears to have been effused within it.

Presented by J. R. A. Douglas, Esq.

2020. Half of a Placenta which is affected with the so-called fatty degeneration. The child was born alive at the eighth month of pregnancy. In various parts of the section the tissue is seen to have lost its spongy character, and to have become hepatized. The hepatization is caused by the infiltration of a granular deposit mixed with minute oil globules. Large cavities marked by portions of whale bone were formed by the extravasation of blood, which had become coagulated and encysted.

2021. Sections of the above, showing the difference between the diseased and healthy tissue. The lower piece shows the process of softening going on in the centre of a mass of hepatization, which would probably be followed by extravasation of blood and the formation of a clot.

2022. Two sections of the same Placenta, with the tissue so infiltrated at the fœtal surface of the placenta that a gradual shading off is produced into healthy tissue, not unlike the extravasation of blood as observed in the apopletic cavities.

Presented by Dr. Priestley.

2023.

2024.

DETACHMENT OF THE PLACENTA.

2025.

2026.

ABORTION.

2027. An Ovum. Blood has been poured out to a considerable extent between the decidua and chorion, and produced the uneven knotty appearance to which the name "tuberculated ovum" is given. The embryo is lying at the bottom of the bottle.

2028. A diseased Ovum aborted about the sixth week of pregnancy. Blood has been extravasated between the membranes. The fœtus is about three-quarters of inch long, and curved upon itself; the extremities are just protruding, but there is no distinction between the fingers and toes. The eye is distinct, and there is a transverse slit for the mouth. The umbilical cord appears as a thick pedicle.

2029. A diseased Ovum, forming a fleshy mole. Blood has been freely extravasated into the membranes, which form an almost solid mass. The chorion villi are seen in one part of the preparation hanging free, with bulbous and slightly cystic terminations.

From a woman, aged 21 a primipara. Pregnancy was supposed to have lasted six months, when hæmorrhage occurred. The mass was removed from within the os uteri, when the bleeding ceased. There was a decidua, but no trace of a fœtus.

2030. A diseased Ovum. The membranes form an almost smooth walled cyst, in which some calcareous matter has been deposited. The sac is about equal in size to a swan's egg. The embryo is very small; probably the ovum continued to grow some time after the death of the embryo.

2031. A diseased Ovum. The fœtus has disappeared.

2032. A similar specimen.

2033. An early Ovum. No embryo is present.

2034. A diseased Ovum, showing arrest of development of the embryo.

2035. An Ovum. Blood has been effused into the membranes. A very small embryo is visible.

2036. An Ovum and its Membranes. The growth of the embryo has been arrested, its natural appearance is but just indicated. The amnion is diseased and thickened; the villi of the chorion are in some places myxomatous, and blood has evidently been poured out between it and the decidua, as is shown by the prominences on the inside of the ovum. An embryo is present.

2037. Portion of an Ovum. The membranes are filled with extravasated blood and yellow matter deposited between the chorion and amnion. The age of the membranes is later than that of the embryo.

2038. An Ovum of early date. The villi of the chorion are enlarged at their extremities.

2039. A diseased Ovum. A yellow substance, probably decolorised blood, is present in the membranes. There is a small embryo.

2040. Section of an Ovum. The membranes present appearances similar to those seen in the preceding specimens. The embryo is apparently between the second and third month.

2041.

DISEASES OF THE MEMBRANES.

2042. Abortion at the sixth or seventh month. The membranes have lost much of their transparency; there is some gritty deposit on that part which covers the placenta.

DISEASES AND DISPLACEMENTS OF THE UMBILICAL CORD.

2043. Two dried Placentæ, with the umbilical cords attached to their margins, forming the so-called "battledore placenta."

2044. A Placenta, dried and painted. The umbilical cord is attached near to its margin. A less marked example of the condition illustrated by the preceding specimen.

2045.

SERIES XXXVI.

INJURIES AND DISEASES INCIDENTAL TO GESTATION AND PARTURITION.

MISSED ABORTION.

2046. A Uterus, ten days after delivery, laid open on the anterior aspect. Occupying the left half of the cavity of the fundus, and firmly attached to the uterine wall, there is a growth consisting of a solid material of a yellow colour with numerous villous processes attached to it. It has been described as a portion of a retained placenta, but is most probably the chorion of a second embryo.

From a woman, who died from continued hæmorrhage.

EXTRA-UTERINE FŒTATION.

2047. The parts from a case of Extra-Uterine Fœtation. The uterus is slightly enlarged, and contains an imperfectly formed decidua. On the left side there is a thin cyst, probably formed by the ovary containing a well formed fœtus at about the fifth month of gestation. The cyst is connected with the uterus by bands of lymph as well as by its natural connection, and has a loose cellular exterior by which it is adherent to surrounding organs.

2048. A Uterus with the Ovaries. In the right Fallopian tube there is a sac containing an embryo with its membranes at about the third month of gestation, The uterine walls are thickened, and in the cavity there are traces of a decidua.

2049.

2050. A Uterus and its Appendages. In the left Fallopian tube there is a cyst, now ruptured, which contained an embryo. In the corresponding ovary there is a recent corpus luteum. No distinct decidua is present in the uterine cavity.

From a woman, who died from peritonitis and collapse, consequent on the rupture of the cyst. It was the first pregnancy, and only one menstrual period had been passed. The ovum was found in the abdominal cavity at the autopsy.

Presented by Dr. Priestley, 1860.

2051. The Bones of a Fœtus, from a case of extra-uterine fœtation.

2052. The Bones of a Fœtus of nearly the full period irregularly matted together; from a case of extra-uterine fœtation.

FŒTATION IN AN UNDEVELOPED UTERINE HORN.

2053.

CANCEROUS AND OTHER TUMOURS COMPLICATING PREGNANCY.

2054.

MORBID PARTURITION.

LACERATION OF THE VAGINA AND CERVIX UTERI.

2055. Half of a Uterus; from a case of recent delivery. The walls are much thickened. The internal surface is rough and shreddy, and there is a large irregular rent extending through the uterine wall at the cervix on the right side.

Delivery was effected by the forceps. The patient died on the fifth day from acute peritonitis.

Vide Specimen No. 2061.

LACERATION OF THE PERINÆUM.

2056.

SLOUGHING OF THE VAGINA AND UTERUS.

2057. A Uterus, laid open. On the mucous surface of the uterus at the junction of the cervix and fundus are two large patches where sloughs have separated, causing considerable loss of substance.

The sloughing was caused by long continued pressure of the practitioner's hand, kept up for the purpose of restraining hæmorrhage. The os uteri was rigid. The patient died on the fifth day of hæmorrhage from separation of the sloughs. The placenta was implanted near to the os internum, but did not actually overlap it.

Presented by Dr. Hall Davis.

2058. A Uterus and Bladder. The internal aspect of the cervix uteri and of the bladder show extensive areas of sloughing, the result of compression against the pubes by the fœtal head.

From a woman, who died after delivery by the crotchet.

VESICO-VAGINAL FISTULA.

2059.

TUMOURS OBSTRUCTING OR COMPLICATING DELIVERY.

2060. A flattened Tumour, which occupied the posterior wall of the cervix uteri, and prevented dilatation of the os and descent of the fœtal head. Delivery was effected by the long forceps, and the tumour was removed eight days after. It consists chiefly of smooth muscular fibres like those of the uterus.

Vide *Obstet. Soc. Trans.*, vol. i.

Presented by Dr. Priestley.

2061. The Os and Cervix Uteri, with the Vagina and Rectum. There is a tumour the size of a fist immediately behind the cervix and to the left of the rectum. The uterus shows a laceration near the same spot, and the vagina is sloughy. The os uteri is partially separated by a transverse laceration.

RUPTURE OF THE UTERUS.

2062. A Uterus at the full period of gestation, with the Vagina and Bladder. There is a large irregular transverse rent with ragged pulpy edges through the cervix in front, and an extensive longitudinal laceration through the posterior wall of the fundus, and below this the peritoneal surface presents a circular shreddy laceration.

2063. A Uterus and its Appendages at the eighth month of gestation. There is an extensive laceration of the peritoneal surface of the fundus involving the superficial muscular fibres. The liver was also ruptured, and a quart of blood was found in the peritoneal cavity.

The injury was caused by the patient falling off a chair on which she was standing to hang up clothes on a line. The accident took place at 4 p.m., and at 4 a.m. on the following day labour supervened, and the woman died undelivered at 7 a.m. On post mortem examination the uterus was found to contain twins.

Presented by Dr. Hall Davis.

Vide 2055, Nos. 2061, 2064.

INVERSION OF THE UTERUS.

2064. A Uterus at the full period completely inverted. The lining membrane, is soft and shreddy. There is extensive transverse laceration at the cervix. The patient died of peritonitis.

2065. A Uterus, with the external Organs of Generation. The uterus is completely inverted, and forms a pear-shaped tumour, the size of an adult head, hanging down from the labia. The first two or three inches consist of the inverted vagina. The situation of the os is indicated by a slightly prominent ring. The lining membrane of the uterus is shaggy; the part to which the placenta was attached is well marked.

The inversion is said to have been produced by the midwife pulling on the cord. The patient died of hæmorrhage.

RETAINED AND ADHERENT PLACENTA.

2066.

Vide Specimen No. 2046.

CÆSAREAN SECTION.

2067. A Uterus at the full period of gestation, with the integuments of the abdominal wall. In its anterior wall is an incision six inches in length, held together by three sutures; no union had taken place. In the integuments of the abdomen there is an incision extending for seven inches downwards from the umbilicus, united by wire sutures.

The patient lived a week after the operation.

PUERPERAL METRITIS.

2068. A Uterus and its Appendages, seven days after delivery. In both ovaries are several old corpora lutea with central cavities. The one connected with the last pregnancy is cut through near the surface of the right ovary.

Presented by Dr. Priestley, 1860.

2069. A Uterus and its Appendages, injected. The uterus is laid open behind. The lining membrane is highly vascular, and hangs in shreds. The right ovary is infiltrated with pus. The left is not present. The Fallopian tubes also contain pus. The peritoneum is injected.

From a woman, who miscarried at the third month of pregnancy. The membranes were retained; for some days she suffered from profuse hæmorrhage. She died eventually of phlebitis.

2070. A Uterus five days after delivery, laid open. It is much less contracted than usual, and the lining membrane is ragged and shreddy, and at the fundus, where the placenta appears to have been attached, it is gangrenous.

2071. A Uterus and its Appendages. The uterus is laid open; the sinuses are filled with purulent coagula, and their walls appear thickened. The cavity of the uterus was filled with offensive purulent matter. The peritoneal surface is covered with lymph. There was general peritonitis and pyæmic abscesses in the lungs.

P. M. Reg., vol. ii, No. 435.

2072. A Uterus and its Appendages. Its lining membrane is shaggy and villous, the result of inflammation following delivery.

SERIES XXXVII.

DISEASES OF THE MAMMARY GLAND.

AFFECTIONS OF THE NIPPLE.

2073. A Mammary Gland, removed during life for chronic eczema of the nipple. The areola has been tinted with carmine.

There is no cancerous infiltration, although that condition not uncommonly follows upon long standing eczema of the nipple.

Presented by George Lawson, Esq.

TUMOURS AND ALLIED MORBID GROWTHS.

SIMPLE CYSTS.

2074. A portion of a Mammary Gland. Immediately beneath the nipple there is a cyst the size of a nutmeg; within it and attached to its posterior wall there is a second cystic growth. The disease is in an early stage.

Presented by A. Shaw, Esq., December, 1858.

2075. A Breast, occupied by a tumour the size of a cocoa-nut, composed of two simple cysts of nearly equal size separated by a transverse partition. The integument is adherent to the tumour, and the nipple is retracted.

Vide *Path. Soc. Trans.*, vol. xxi, p. 354.

Presented by George Lawson, Esq.

2076. A Breast, with a portion of the integuments, showing two smooth-walled cysts immediately beneath the nipple. The cysts are empty. The nipple is prominent, and the skin around normal.

2077. A Breast, containing in its centre, immediately beneath the nipple, a rounded cyst, with irregular walls.

2078. A Cystic Growth removed from a male breast.

PROLIFEROUS CYSTS.

2079. A Breast, containing large cysts. The cysts are filled up with proliferous growths, some of which are large rounded nodules the size of walnuts, attached by short broad peduncles; seen in section they show the open mouths of vessels filled with coagula; blood is extravasated in some places. Others are smaller, with long stalks, and there are other growths with tuberculated surfaces resembling warts.

The patient was sister to the lady from whom the large cystic sarcoma, No. 2093, was removed. A third sister has the same disease.

Presented by J. R. A. Douglas, Esq.

2080. A Mammary Gland, which is considerably enlarged on account of the presence of proliferating cystic growths. On the posterior aspect numerous cauliflower-like masses are seen. The nipple is retracted, and the skin and subcutaneous tissue have been in part removed, showing cysts nearly filled with glandular tissue.

From a young woman.

Presented by Henry Morris, Esq.

SERO-CYSTIC DISEASE.

2081. A Proliferating Sero-Cystic Tumour of the left Mamma, involving the whole gland.

From a lady, aged 25, unmarried. It was of eight months' duration; its growth was slow at first, but became very rapid during the last month. The tumour was mobile, and the skin healthy. Removed by Mr. Shaw, January, 1862.

2082. A portion of a Sero-Cystic Mammary Tumour. The entire mass weighed two and a half pounds.

Removed by Mr. Mitchell Henry, February, 1862.

2083. A Breast, incised, showing a sero-cystic growth involving the greater part of the organ. A portion of the growth at the lower part of the specimen is undergoing softening.

Presented by Campbell De Morgan, Esq., F.R.S.

2084. A large Sarcomatous Tumour, containing cavities with proliferating growths, removed from the mammary gland.

FIBRO-ADENOMA (Chronic Mammary Tumour).

2085. A small Tumour from the outer part of the left breast.

Removed by Mr. De Morgan, April, 1859, from a woman, aged 37.

2086. A small Lobulated Tumour of irregular shape.

Removed from the outer part of the right breast of an unmarried woman, aged 27. It had existed for two years.

2087. 2088.

2089.

FIBRO-CELLULAR TUMOURS.

2090. A Fibro-Cellular Tumour, from the breast.

From a woman, aged 34. The gland was excised by Mr. Bryant in Guy's Hospital, May, 1868.

Reported in *Path. Soc. Trans.*, vol. xix, p. 387.

2091. A Lobulated Tumour, which hung from the nipple, injected. On microscopical examination it was found to have a fibro-cellular structure.

From a woman, aged 40. The growth was congenital. At the menstrual periods it became painful, and filled with blood. It was supplied by one small artery, which entered its pedicle.

MYXOMATA, SARCOMATA, ADENO-SARCOMATA.

2092. One-half of a large Sarcomatous Tumour.

From the breast of a lady, from whom a cystic tumour, containing numerous intracystic formations, had been excised, July, 1860. The other half of the growth is preserved in the Museum of Guy's Hospital.

Presented by J. Birkett, Esq., 1861.

2093. A Sarcoma, growing beneath the female breast.

Presented by J. R. A. Douglas, Esq.

2094. A portion of a large Cystic Sarcoma, from the breast.

Presented by Campbell De Morgan, Esq., F.R.S.

2095. A Sarcomatous Tumour of the breast, the size of a large orange. The tumour had a fibrous investment and smooth white surface studded with small cysts, formed by dilated galactophorous ducts. Microscopically it consisted of small round, oval, and a few fusiform cells, with a fibrillated substance arranged around the tubes. It exuded a juice which consisted of cells of various shapes and sizes. The opposite breast was the seat of a scirrhous tumour with enlargement of the corresponding axillary glands. The tumour weighed four pounds.

From a married woman, aged 55. It exuded a thick creamy fluid for six years.
Reported by Mr. De Morgan, *Path. Soc. Trans.*, vol. xix.

2096. 2097.

2098.

EPITHELIOMA.

2099. A Breast, which is the seat of epithelioma.

It was removed by J. M. Arnott, Esq., F.R.S.
Reported in *Path. Soc. Trans.*, vol. ix, by Dr. Van Der Byl.

SCIRRHOUS CANCER.

2100. A section of a Female Breast. It contains a scirrhous growth in its substance. The tumour is firm, of a light grey colour; its boundary is distinct. The growth reaches from the skin through the whole substance of the gland.

2101. A Mammary Gland, infiltrated with scirrhous cancer.

Removed by Mr. Moore, 1866.

2102. A female Breast. The skin covering it presents little elevations resembling hypertrophied papillæ, varying in size from a pin's head to a large hempseed. In parts they are clustered thickly together over considerable tracts. This condition extended from the middle of the neck to midway between the ensiform cartilage and the umbilicus. The axillary, mediastinal glands, and opposite breast were infiltrated with cancer.

From a woman, aged 48, who died in the Hospital 3rd October, 1869.
P. M. Reg., vol. 9, No. 104.

2103. A female Breast, which has disseminated through it isolated nodules of cancer.

Presented by C. De Morgan, Esq., F.R.S.

2104. A Breast, with the neighbouring portion of the thoracic wall and underlying Lung. The disease has destroyed the entire breast, and produced an opening into the anterior wall of the thorax about two inches in diameter. The lung is adherent around the internal margin of the opening. The pleura was filled with purulent fluid.

Reported by Mr. Shaw, *Path. Soc. Trans.*, vol. vii, p. 45.

2105. Section of a female Breast, with the adjoining ribs. A scirrhous cancer occupies the gland. The whole surface of the growth is ulcerated. The tumour is attached to the ribs, but the pleura beneath is healthy. The tumour has been injected.

2106. A left female Breast, which is the seat of a cancerous growth, the surface of which is covered with prominent nodules.

The right breast, left femur, and bones of the face, were also affected.

2107. Section of a female Breast affected with scirrhous cancer. The skin is involved on either side of the nipple, which is retracted between the cancerous growth. Ulceration has just commenced.

2108. Section of a female Breast, containing a large scirrhous growth. The skin is involved in the disease and stretched. Ulceration is commencing on the surface.

2109. Section of a female Breast affected with cancer. There is an irregular cyst with shreddy walls in one part of the growth.

2110. A female Breast, showing scirrhous cancer.

It was removed by Mr. Shaw, May, 1860.

2111. A small Scirrhous Tumour from the breast, and the axillary glands from the same case.

From a man, aged 42.
Removed by Mr. Moore, 10th February, 1861.

2112. Section of a Breast, containing a scirrhous cancer in its upper part; the growth is beginning to involve the skin.

Removed by Mr. Moore, February, 1860.

2113. A Cancerous Growth removed from the breast.

Presented by J. W. Hulke, Esq., F.R.S.

2114. A Breast removed *en masse* for cancer with "Fell's paste." There are nine parallel incisions extending through the gland. The posterior surface is smooth.

The growth was, by permission, removed by Mr. Fell, from a patient in the cancer wards. It returned in the cicatrix of the wound twenty-two years afterwards, and proved fatal.

2115. A Male Breast infiltrated with scirrhous cancer. There is an ulcerated opening at the site of the nipple. A portion of one of the axillary glands is included in the bottle.

2116. Section of a female Breast, uniformly infiltrated with scirrhous cancer. The overlying skin is thickened and adherent to the growth. The nipple is retracted and ulcerated; near it there is a small cyst.

2117. A Mammary Gland, infiltrated with scirrhous cancer. The breast is much enlarged, and the skin shows numerous small nodules. At the upper part of the growth a cavity has formed the size of an unshelled walnut; its walls are ragged and irregular. The excavation is probably due to the gradual softening of the growth after caseation. A separate portion of the growth, with the nipple, is suspended in the same jar.

Removed post mortem from a patient who was under the care of Mr. Moore, 14th July, 1864.

2118. A Breast, from a case of scirrhous cancer of the atrophic variety.

For the spine from the same case, *vide* No. 784.

2119. A Scirrhous Growth removed from the breast.

Presented by C. Moore, Esq., 1867.

2120. A Male Breast, infiltrated with a scirrhous growth.

2121. 2122. 2123.

2124. 2125.

MEDULLARY CANCER.

2126.

COLLOID CANCER.

2127. A Mammary Gland, which has a nodule of colloid disease the size of a large walnut embedded in its lower part.

A similar nodule had previously been excised, but the disease recurred after the operation, necessitating the removal of the whole breast.

Presented by George Lawson, Esq.

MELANOTIC TUMOURS.

2128.

FIBROUS TUMOURS OF THE NIPPLE.

2129.

Vide Specimen No. 2091.

TUMOURS OF THE BREAST OF UNCERTAIN NATURE.

2130. A Breast, which is the seat of a new growth of a doubtful nature.

2131. Portion of a Mammary Tumour, showing cysts at the surface.

It was removed by Mr. Shaw 20th January, 1861.

2132. A Breast, showing a stage of cystic degeneration. A sprouting fungus mass is seen protruding through the skin above the nipple.

ENTOZOA.

2133. A Tumour. It consists of one large cyst containing several small hydatids. It had apparently developed between the pectoral muscle and the mammary gland.

From the breast of a woman, aged 28. It was removed by Mr. Henry, February, 1861.

SERIES XXXVIII.

ANATOMY OF STUMPS AFTER THE AMPUTATION OF THE LIMBS.

CONDITIONS OF THE BONES OF STUMPS.

CLOSURE OF THE MEDULLARY CANAL.

2134.

Vide No. 2141.

ADHESION OF THE TENDONS TO THE EXTREMITY OF THE BONE.

2135.

ATROPHY OF THE BONES OF STUMPS.

2136.

Vide Series V, No. 348.

EXCESSIVE FORMATION OF NEW BONE AROUND THE STUMP.

2137.

CARIES.

2138.

NECROSIS.

2139.

Vide Series V, Nos. 437, 438.

CONICAL STUMP.

2140.

Vide Series XLII, No. 229.

FORMATION OF BULBOUS ENLARGEMENT ON NERVES AT THE EXTREMITIES OF STUMPS.

2141. A Stump two years after amputation, immediately below the elbow. The ends of the median, ulna, and musculo-spinal nerves present enlarged and bulbous ends. There is a high division of the brachial artery. The medullary canals of the cut radius and ulna are apparently closed by ossification of fibrous tissue.

Vide Series X, Nos. 878, 879.

Presented by J. B. Sutton, Esq.

CHANGES IN THE VESSELS OF AMPUTATED LIMBS.

2142. The Femoral Artery and Vein from a Stump twenty-eight days after amputation. There is no attempt at the formation of a clot in either vessel.

From the same cases as Nos. 117 and 319. The patient died of secondary hæmorrhage.

Presented by J. W. Hulke, Esq., F.R.S.

SERIES XXXIX.

VARIOUS INSTRUMENTS AND SUBSTANCES PRODUCING INJURIES.

2143. Part of a Foil.

From the orbit of a boy. It had probably penetrated the cavity of the skull between the orbital plate of the frontal bone and the dura mater, giving rise to coma and other cerebral symptoms.

Presented by Mr. Shaw.

2144. Portion of a Tobacco Pipe.

It had punctured the common carotid artery, and caused death by hæmorrhage.

2145. A Half-penny.

This was swallowed by a child, aged 7 years, on 2nd January, 1852, and passed per anum 17th February of the same year.

2146. A Needle, embedded in the Great Omentum.

From a woman.
Reported by Dr. Coote, in *Path. Soc. Trans.*, vol. xi, p. 93.

2147. Fragments of a Gallipot.

From the vagina of a woman, where it had been for three months. The patient stated at one time that she had introduced it to keep up the womb, at others that it was to save a discharge to which she was subject. After its removal a vesico-vaginal fistula was discovered and a calculus in the bladder, which was removed by operation. The gallipot was covered with phosphatic concretion.

2148. Two pieces of Tobacco Pipe.

The longer piece was extracted from the orbit of a man August, 1853. It had entered the orbit through the upper lid, making a small round hole, and then passed into the orbit without injury to the globe. Nothing could be seen externally, but it could be felt with a probe. It was dissected out, and the man got well in ten days.

The other piece escaped from an abscess four weeks afterwards; the abscess was supposed to be connected with a tooth, and it was not until the pipe was removed that the man recollected the accident. It is probable that he had fallen asleep on his pipe.

Presented by Mitchell Henry, Esq.

2149. A piece of Metal.

It had been fixed in the mouth of a little girl, aged 10, to correct an irregularity in the growth of the teeth. It was swallowed and passed per anum.

Presented by A. Shaw, Esq.

2150. A common Pin, encrusted with calcareous matter, removed from an abscess in the right iliac region.

2151. A portion of Iron Gas-pipe, six inches long and half an inch in diameter, with a "junction" screwed on at one end. This was used as a pistol by a young man who had determined to commit suicide. At the open end of the junction a boxwood plug has been inserted, and the breech strengthened by lashing the wooden plug with many turns of string to the barrel. A touch-hole has been filed in one side of the breech. The pistol was loaded with powder and bullet, and the charge fired against the forehead. In the same jar there are also some pieces of the frontal bone, removed by trephining, and the bullet which caused the injury. The injury was followed by a hernia cerebri, but the patient eventually recovered. A photograph of the patient, placed in the bottle, shows the appearance of the wound in the forehead after cicatrization.

From a patient, aged 20, who was admitted into the Hospital 21st March, 1874, under the care of Mr. George Lawson, and discharged 5th June, 1874.

See *Lancet*, 19th September, 1874.

2152.

SERIES XL.

GENERAL PATHOLOGY.*

HYPERTROPHY.

2153. A Heart, showing great hypertrophy of the left ventricle. The cavity of the ventricle is somewhat dilated. The aortic valves, the seat of atheroma, were incompetent to close the orifice.

2154. A Bladder and part of the Penis. The bladder is greatly hypertrophied. At the junction of the bulbous and membranous portions the canal of the urethra is almost obliterated by a fibrous stricture. A false passage, through which a bristle is passed, extends from just in front of the stricture to the bladder, where it opens behind and to the left of the urethra. It has a length of about three and a half inches, and passes beneath the urethral canal.

2155. A Skull. The bones, except those of the face, are thickened, very dense, and of ivory hardness. The entire skull weighs two and a half pounds; an average European's skull compared with it weighed one and a half pounds. No cause could be assigned for the hypertrophy.

Presented by J. B. Sutton, Esq.

2156. A lobule of Fat, covered with skin. Microscopically it contained a considerable quantity of fibrous tissue.

From a man, whose subcutaneous fatty tissue in the gluteal region had undergone hypertrophy, producing the deformity known as "Hottentot bottom." The overgrown fat weighed over eighty pounds.

Presented by Henry Morris, Esq.

2157.

ATROPHY.

2158. A Skull, the bones of which are light and porous from senile atrophy. There is general diminution in the weight, which is fourteen ounces, as compared with twenty-four ounces, the average weight of an European skull. The cranium is probably diminished in size, for notwithstanding the age, the sutures are unobliterated, save in the region of the obelion, and when examined

* For other specimens in the Museum illustrating General Pathology, see the Table of References at the commencement of the volume.

by transmitted light are peculiarly obvious and transparent. The orbits are large and out of all proportion to the size of the skull. The alveolar margins have undergone absorption in consequence of the loss of the teeth, and at the posterior part present an eburnated condition. The foramina in the base of the cranium are large and the fissures widely open, but the bones forming the vault have atrophied more than those of the base. The lower jaw has a circumference greater than that of the upper, and the symphysis in the dried skull projects more than an inch beyond the alveolar margin of the upper jaw. It is extremely atrophied, and weighs one ounce, whereas the jaw of a youth aged 20 compared with it weighed three and a half ounces.

From a woman, aged 83, who had been bedridden for many years.

Presented by J. B. Sutton, Esq.

2159. The Ossa Innominata and Sacrum, from the preceding case. They are peculiarly light and spongy, weighing only eight ounces, whereas the corresponding bones of a healthy woman compared with them weighed eighteen ounces.

Presented by J. B. Sutton, Esq.

2160. The Lung of a Monkey. A large hydatid cyst, developed in the thorax, has compressed the lung and produced atrophy.

Presented by F. Samwell, Esq.

2161. A portion of the Skin of the loin with a fistulous opening communicating with the interior of the descending colon. The mucous membrane of the gut bulges into the opening, forming the éperon or spur of Dupuytren. The bowel below the opening is considerably shrunken and atrophied.

From a case of colotomy.

Presented by R. W. Lyell, Esq., M.D., F.R.C.S.

FATTY DEGENERATION.

2162. The Trunk and Limbs of a Fœtus, one-half of which has been dissected to show the skeleton, the remaining half is left intact to show the external characters. The spine ends abruptly at the last dorsal vertebra. The ossa innominata are united along their posterior borders, the sacrum being absent. The bones of the right leg are very thin, and were covered with fat, muscular tissue being entirely wanting. The left leg is partially dissected, so as to show the quantity and disposition of the adipose tissue. Above the umbilicus the specimen presents the proportions of a fœtus at the eighth month, below that point it approaches the characters of one of five months.

A woman in the fifth month of pregnancy fell down stairs, and on account of the shock was confined to bed for several days. The fœtus was born at the eighth month, and lived for three hours. The inference is, that as a result of the fall the development of the spine was arrested, and that all parts below the site of arrested growth, except bone and skin, degenerated into fat.

Presented by J. B. Sutton, Esq.

2163. A Male Toad, with the abdomen laid open so as to show the corpus adiposum, a mass of fat, lying above the testicle, which arises from the degeneration of the anterior extremity of the genital ridge in the embryo, and corresponds to the anterior portion of the ovary.

Presented by J. B. Sutton, Esq.

2164. A Male Frog, disseeted to show the generative organs, in whieh the fatty metamorphosis has extended so far baek as to involve the testicle, which consists chiefly of fat.

Presented by J. B. Sutton, Esq.

2165.

CALCAREOUS DEGENERATION.

2166. Two pieees of a Femoral Artery eonverted by calcareous degeneration into a rigid tube.

From a man, aged 79, whose leg was affected with senile gangrene, whieh proved fatal.

2167. A Larynx and Trachea, showing extensive deposits of calcareous material in the thyroid, cricoid, and traeheal eartilages.

2168. A Frog, with the abdomen opened, and the viseera removed in order to show on either side of the spine a row of white bodies consisting ehiefly of ealeareous matter. In this speeimen they are mueh larger than usual.

Presented by J. B. Sutton, Esq.

2169. A Uterus and its Appendages. Attaehed to the fundus uteri is a fibroid tumour the size of an unshelled walnut, which has undergone complete ealcareous degeneration. The ovaries are atrophied and fibrous.

REPAIR AND REPRODUCTION OF INJURED AND LOST PARTS.

FORMATION AND STRUCTURE OF CICATRICES.

2170.

TRANSPLANTATION AND GRAFTING OF PARTS.

2171.

EFFECTS OF THE CONTINUED PRESENCE OF FOREIGN BODIES.

2172. A portion of the Traehea of an Emu, eontaining a pieee of the trachea of a sheep and three grains of Indian eorn. These foreign bodies have set up severe tracheitis, as is shown by the layer of lymph whieh lines the mueous surfaee. One of the maize grains has eaused uleeration and perforation of the traehea.

Presented by J. B. Sutton, Esq.

PROCESS AND EFFECTS OF INFLAMMATION.

COMPLETELY ORGANIZED EFFUSIONS OF LYMPH, ADHESIONS, AND FALSE MEMBRANES.

2173. The Heart of a Coati affected with pericarditis. The entire surface of the heart is covered with lymph.

The animal died with abscess in the lung and double pleurisy, which had extended to and involved the pericardium.

Presented by J. B. Sutton, Esq.

2174. The Heart of a Tiger, the surface of which is covered with a flocculent layer of lymph.

The animal died from double pleurisy with effusion; the inflammation extended to and involved the pericardium.

Presented by J. B. Sutton, Esq.

INDURATION AND SCLEROSIS FROM INFLAMMATION.

2175. A portion of the shaft of a Femur, split longitudinally. The cavity seen in the cancellous tissue was in the recent state filled with pus, and its walls covered with granulations. A sinus lined with skin led down to the bone through the soft tissues on the inner side of the thigh. The compact tissue of the shaft is very thick, heavy, and like ivory in the vicinity of the inflamed part. New bone is deposited on the exterior of the shaft. The sclerosed portion when examined under the microscope shows diminution in number and size of the Haversian canals.

From a man, who suffered from osteitis. The leg was amputated, on account of the obstinate character of the disease which, in spite of all treatment, had existed for ten years.

Presented by J. B. Sutton, Esq.

SUPPURATION.

2176. A section of the head of a Tibia. In the immediate neighbourhood of the epiphysial line is an abscess cavity, which extends into the epiphysis and also involves the diaphysis. That portion of the cavity above the epiphysial line was occupied by a small sequestrum, its edges are rounded and indurated, in consequence of the long standing inflammation.

Presented by J. B. Sutton, Esq.

2177.

ULCERATION.

2178.

DEATH OF PARTS OF THE BODY, GANGRENE AND NECROSIS.

2179. A left Foot, from a case of senile gangrene.

2180. A Foot affected with gangrene. It is dry, wrinkled, and without cuticle or nails.

2181. The lower end of a Leg. The scaphoid, os calcis, and astragalus are exposed, and the lower end of the tibia and fibula denuded of the soft tissues. The surrounding skin shows evidences of cicatrization.

From a patient affected with gangrene, following fever. The parts were removed by amputation.

Presented by Campbell De Morgan, Esq., F.R.S.

2182. A piece of a Frontal Bone, showing necrosis of the outer table. Over a portion of the affected area the outer table has exfoliated; the remaining portion still *in situ* is blackened.

From a man who died after rhinoplasty.

Presented by C. W. Moore, Esq.

TUBERCLE.

2183.

TUMOURS AND OTHER ALLIED MORBID GROWTHS.

FATTY TUMOURS—LIPOMATA.

2184. A fatty Tumour, large, circular, and lobulated. It was removed from the shoulder.

Presented by Mitchell Henry, Esq.

2185. A small fatty Tumour. It was situated on the inner side of the leg, just below the popliteal space, where it formed a considerable prominence.

2186. A fatty Tumour, lobulated and irregularly branched.

2187. A Fatty Tumour removed from below the right mamma of a man.

Surg. Reg., vol. i, No. 317.

2188. A Fatty Tumour, oval and lobulated.

It grew from the lower angle of the right scapula of a middle-aged woman. It was removed by Mr. Nunn.

2189. A Fatty Tumour, which was removed with an elastic ligature, which is still around the pedicle of the growth.

Presented by Henry Morris, Esq.

2190. A small Lobulated Fatty Tumour.

From beneath the skin of the forearm of a middle-aged woman.

Presented by W. H. Flower, Esq., F.R.S.

2191. A Fatty Tumour, with a portion of the Median Nerve.

It was situated in the palm of the hand below the palmar fascia. The median nerve, three times its usual size, lay coiled in the tumour, and was necessarily removed with it. The greater part of the nerve has undergone fatty degeneration.

From a girl, aged 18.

Presented by A. Pearce Gould, Esq.

2192. Two Fatty Tumours. The larger one measures four inches by three, the lesser three inches by two and a half. They are completely invested by a capsule having the appearance of serous membrane. On section they present the finely granular look of omental fat.

Taken from the abdominal cavity of a mare killed at the Zoological Gardens. They probably represent detached appendices epiploicæ.

Presented by J. B. Sutton, Esq.

Vide Specimens, Series XXI, Nos. 1500–1503.

2193. A Fatty Tumour. It was situated beneath the sterno-mastoid muscle, and was firmly attached to the periosteum of the clavicle. Some muscular fasciculi may be seen in the tumour near its attachment to the periosteum.

From a child, in whom it was congenital.

Presented by A. Pearce Gould, Esq.

2194. A Fatty Tumour from beneath the complexus muscle.

From a child a few months old. It had been noticed since the time of birth.

Presented by A. Pearce Gould, Esq.

2195. A Fatty Tumour containing bone. It was attached to the buttock of an old man.

Presented by Henry Morris, Esq.

2196. A Fatty Tumour. It was situated beneath the deep fascia of leg just below the knee.

Presented by J. W. Hulke, Esq., F.R.S.

OSSEOUS TUMOURS—OSTEOMATA.

2197.

CARTILAGINOUS TUMOURS—ENCHONDROMATA.

2198. The Ring Finger of a right Hand, showing an enchondroma.

It was removed by Mr. Reeves. A cast of the entire hand is preserved.
Vide Series XLII, No. 131.

FIBROUS AND FIBRO-CELLULAR TUMOURS—FIBROMATA.

2199. A Fibrous Tumour from the subscapular fossa.

2200. Portion of a large Fibro-cellular Tumour, which grew from the scalp. It weighed more than three pounds.

From a woman, aged 36. The tumour had been growing for more than thirty years.

Presented by W. H. Flower, Esq., F.R.S.

Vide *Lancet*, 27th October, 1860.

2201.

FIBROUS TUMOURS CONTAINING CARTILAGE AND BONE.

2202.

MYXOMATA. MYXO-SARCOMATA.

2203. A Myxomatous Tumour, the size of a small cocoa nut, which was embedded among the muscles of the thigh.

Reported in *Path. Soc. Trans.*, vol. xx.

Presented by Charles Arnott, Esq.

2204. A Myxomatous Tumour from the cranium.

Presented by J. W. Hulke, Esq., F.R.S.

FIBRO-MUSCULAR TUMOURS—MYOMATA.

UNSTRIPED FIBRO-MYOMATA.

2205.

CALCIFICATION OF FIBRO-MYOMATA.

2206.

STRIPED MYOMATA.

2207.

SARCOMATA.

ROUND-CELL SARCOMA.

2208.

GLIOMA (Glio-Sarcoma).

2209.

LYMPHO-SARCOMA.

2210.

SPINDLE-CELL SARCOMA.

2211. A Tumour which was attached to the right petrosal bone. The growth projected into the cranium, and produced neuralgia in the right side of the head and face, associated with paralysis, anæsthesia, and wasting of the muscles. It also gave rise to optic neuritis.

Vide *R. Lond. Ophth. Hosp. Rep.*, 1866.

Presented by J. W. Hulke, Esq., F.R.S.

2212. A section of a large Sarcomatous Tumour which was attached to the mesentery.

From a woman, who was under the care of Dr. Quain in University College Hospital. A section of the tumour is also preserved in University College Museum.

2213. A Cystic Sarcomatous Tumour from the thigh of a woman.

Presented by Campbell De Morgan, Esq.

2214. A Sarcomatous Tumour from beneath the angle of the right lower jaw of a boy aged 16.

Path. Soc. Trans., vol. viii.

Presented by Mitchell Henry, Esq.

2215. A right Knee Joint, partially dissected. Lying over the lower end of the femur, on the inner side of the joint, is an irregularly oval cystic tumour, about twice the size of an orange. It is not attached to bone. The Sartorius muscle spreads out over it, and is closely adherent to it. The tendon of the gracilis is enclosed by a reflection from the posterior wall of the cyst. The tumour is composed of one large cyst and several smaller ones with an intra-cystic growth. The cysts contained blood and colloid matter. Microscopical examination showed it to be a spindle-celled sarcoma.

From a woman, aged 50, who was admitted into the Middlesex Hospital 20th November, 1866. She had suffered pain on the inner side of the right thigh for five years, but had only noticed a tumour for ten months. The thigh was amputated.

Vide *Path. Soc. Trans.*, vol. xviii, p. 272.

2216. A left Hand, the palm of which is occupied by a sarcomatous tumour the size of a hen's egg.

2217. A hind Leg of a Rat. The tibia has become the seat of a large osteo-sarcomatous tumour.

MYELOID SARCOMA.

2218.

MELANOTIC TUMOURS (TUMOURS CONTAINING PIGMENT).

2219. A portion of a Melanotic Tumour. The growth consists of light and dark brown coloured masses, and others almost black in colour.

2220. A male Breast, affected with melanotic cancer.

Presented by Andrew Clark, Esq.

2221. A Melanotic Sarcoma, which grew around the anus.

From a man, who had been affected with the disease eighteen months. Thirteen months after removal the growth recurred, and two months later the patient died.

Presented by C. W. Moore, Esq.

2222. Two Papillomata from the Skin. The upper one contains melanotic deposit.

GLANDULAR TUMOURS—ADENOMATA.

2223. A Breast, seen in section. The tumours consist of a dense looking stroma containing cavities.

POLYPI CONTAINING GLANDULAR TISSUE.

2224. A Polypus removed from the back of the Pharynx, into which papillary-like portions of the growth are projecting.

WARTS—PAPPILLOMATA.

2225. A Papilloma, which grew on the skin of the abdomen immediately above the pubes.

CANCERS—CARCINOMATA.

EPITHELIAL CANCER (Epithelioma).

2226. A Nose affected with Epithelioma.

From a woman, aged 60.

2227. A portion of a lower Lip, containing a nodule of epithelioma.

From a man, aged 78. Removed by Mr. Flower in 1860; the disease soon reappeared in the glands beneath the angle of the jaw.

2228. A Clitoris affected with epithelioma, forming a tumour the size of a bantam's egg.

Presented by C. W. Moore, Esq.

HARD OR SCIRRHOUS CANCER.

2229. A Female Breast, seen in section. The breast tissue is replaced by a scirrhous cancer.

Presented by A. Pearce Gould, Esq.

SOFT OR MEDULLARY CANCER.

2230. A portion of a large Tumour which grew in the Groin. Microscopically it was of the nature of medullary cancer.

2231. The Posterior part of a Head, showing a large encephaloid growth projecting from the occiput, and involving the brain.

From a little girl.

2232. A large Carcinomatous Tumour involving the Ribs, and forming prominent masses on both aspects of the chest wall.

2232A. A large Vascular Medullary Cancerous Growth from the Abdomen. It caused flattening of the kidney.

Presented by Dr. Brinton.

COLLOID CANCER.

2233. A Colloid Tumour from the Omentum.

Presented by W. Sibley, Esq.

2234. A Rounded Tumour, consisting of colloid cancer.

From the calf of the leg of a woman, aged 61. It had been growing for fifteen years without causing any pain or much inconvenience, until the surface began to ulcerate.
Vide *Path. Soc. Trans.*, vol. x, p. 256.

Presented by J. R. A. Douglas, Esq.

2235. A small Colloid Tumour. It grew with several others from the cicatrix left after the removal of the preceding specimen.

Presented by J. R. A. Douglas, Esq.

2236. A larger Lobulated Recurrent Growth from the same case.

2237. A Colloid Growth.

Presented by Richard Cartwright, Esq.

VASCULAR TUMOURS—ANGIOMATA.

2238. An Erectile Tumour.

From the calf of the leg of a girl, aged 10.
Vide *British and Foreign Med. and Chir. Review*, January, 1864.

Presented by C. De Morgan, Esq., F.R.S.

2239. An Erectile Tumour.

Removed from the forearm of a man, aged 41, by Mr. C. De Morgan.
Reported in *Brit. and For. Med. and Chir. Review*, January, 1864, with microscopical drawings by Mr. Hulke.

2240. An Erectile Tumour.

Removed from the infra-axillary region of girl, aged 17.
Vide *Brit. and For. Med. and Chir. Review* for January, 1864.

2241. A Vascular Growth which springs apparently from the interior of a cyst, the top of which having been destroyed allowed the growth to pass out, and then the small size of the aperture strangled it. It bled freely when touched.

From the wrist of a man, where it had existed thirty years. It was said to have followed puncture of an artery. The tumour lay superficial to the tendons of the wrist.
Vide Series XLII, No. 92.

Presented by C. De Morgan, Esq., F.R.S.

2242. An Erectile Tumour, removed from the neck of an infant.

2243. The two halves of an Erectile Tumour which was removed from the cellular tissue in front of the thyroid cartilage.

CYSTIC OR ENCYSTED TUMOURS—CYSTOMATA.

I. CYSTS WHICH PROCEED FROM TRANSFORMATION OF NORMAL HOLLOW SPACES.

a. Cysts through Enlargement of Normal Serous Sacs.

2244.

b. Cysts through Distension of Closed Follicles.

2245. A simple Ovarian Cyst removed by ovariotomy.

The woman made a good recovery.

Presented by J. W. Hulke, Esq., F.R.S.

c. Cysts by Transformation of Mucous Membrane Canals from Distension.

2246.

d. Cysts formed by Closure or Obstruction of, and Accumulation of the Secretion within, the Ducts of Glands and their Prolongations: so called Retention Cysts.

2247.

e. Cysts arising from Blood and Lymphatic Vessels.

2248.

f. Cysts connected with the remains of Fœtal Organs, or from the Inclusion or Displacement of Fœtal Structures, and Congenital Cysts.

2249. Vertical section of a Tumour. The structure is cellular throughout.

Removed by operation from the coccygeal region of a newly-born infant.

2250. A Dermoid Cyst attached to the rectum.

2251. Hair and sebaceous material from a Dermoid Cyst, removed during life.

Presented by J. W. Hulke, Esq., F.R.S.

II. CYSTS FROM EXTRAVASATION OF BLOOD.

2252. A Sanguineous Cyst.

Removed from the thigh by Mr. Lawson.
Path. Soc. Trans., vol. xxiv.

2253. A Sanguineous Cyst, which contained a large quantity of cholesterine.

Removed by Mr. C. De Morgan from the shoulder of a gentleman, aged 40.
Vide *Path. Soc. Trans.*, 1859–60.

III. CYSTS OF PRIMARY ORIGIN.

2254. A Cyst, dried.

2254A. A Cyst, inverted.

It was removed from the parotid region by Mr. Moore.

CYSTS OF UNCERTAIN ORIGIN.

2255. A piece of Peritoneum, covered with Cysts filled with air. They vary in size from a pea to a nut. A portion of the pyloric end of the stomach from the same case is also displayed. It shows deposits of pigment.

2256. The Breast of a Bitch, enormously enlarged by a multilocular cystic tumour. The intra-cystic growths are villous.

The tumour was removed during life. Vide *Path. Soc. Trans.*, vol. ix, p. 460.

Presented by E. H. Ambler, Esq.

2257. A Cyst removed from the parotid region.

CYSTS FORMED BY THE GROWTH OF PARASITES.

2257A. A large Hydatid Cyst, which developed between the bladder and rectum.

From a male patient.
P. M. Reg., 1859, No. 932.

2258. A collection of Hydatid Vesicles.

2259. A Hydatid Cyst and two other Growths.

They were removed from the axilla by Mr. Moore, 1866.

2260. A large Hydatid Cyst. It is sloughy and shreddy at the lower part.

SERIES XLI.

CALCULI AND OTHER CONCRETIONS FORMED IN VARIOUS ORGANS.

CONCRETIONS FROM THE CIRCULATORY ORGANS.

PHLEBOLITHES.

1.

CONCRETIONS FROM THE RESPIRATORY ORGANS.

CALCAREOUS DEPOSITS FROM THE LUNGS.

2.

CONCRETIONS FROM THE DIGESTIVE ORGANS.

CALCAREOUS DEPOSITS FROM THE TONSILS.

3.

CALCAREOUS DEPOSITS FROM THE SALIVARY GLANDS.

4. Three irregularly shaped Salivary Calculi.
Presented by Dr. Wight.

5. A Salivary Calculus.
From a man.
Presented by J. R. A. Douglas, Esq.

6. A large Salivary Calculus with a nucleus of wood.
Presented by J. W. Hulke, Esq., F.R.S., 1872.

7. A Salivary Calculus.
Presented by S. W. Sibley, Esq.

8.

CONCRETIONS FORMED IN THE STOMACH AND INTESTINES.

OF MAN.

9. Numerous dark coloured roundish Concretions, from the size of a hemp seed to that of a pea. They are composed of vegetable tissue, spiral vessels, and small fibres resembling oat hairs.

Passed with the fæces by a lady, aged 58.

Presented by S. W. Sibley, Esq.

10. Two Calculi, one in section, composed of the fine setæ of the oat seed upon a damson stone as a nucleus.

From the colon. Similar calculi are not uncommon where oatmeal is eaten.

Presented by R. Cartwright, Esq.

11.

OF ANIMALS.

12. A Hair Ball covered with a thin earthy crust.

From a cow.

13. A Hair Ball covered with a thin earthy crust.

Found in the stomach of an ox in Jamaica.

14. Sections of a large Hair Ball.

From the stomach of a cow.

15. A Hair Ball.

From the stomach of a Hyæna.

Presented by J. B. Sutton, Esq.

16.

17. A very large Calculus, consisting chiefly of triple phosphates with a considerable quantity of animal matter. A piece of iron forms the nucleus.

From the large intestine of a horse.

18. Section of a large Calculus; the sides are flattened owing to the pressure of two other calculi.

From the intestines of a horse.

Presented by Charles Heisch, Esq.

19. A Calculus from the intestines of a horse.

Presented by E. H. Ambler, Esq.

20. Sections of an Intestinal Concretion from a Horse.

Presented by Dr. Cooper Rose.

21. A similar specimen, with a piece of iron in the centre.

22. 23. 24. 25. 26. 27. 28. 29. 30. 31. Ten solid Calculi similar in character to the preceding, which have been divided; a foreign body in nearly all forms the nucleus; all are from the intestines of animals.

32.

BILIARY CALCULI.

33. A large single diamond-shaped Biliary Calculus formed in layers.

34. Numerous small Calculi from a gall-bladder.

35. A Biliary Calculus of light yellow colour, and very crystalline fracture composed of nearly pure cholesterine.

Presented by F. Samwell, Esq.

36. Sections of three Calculi from a gall-bladder.

Presented by F. Samwell, Esq.

37. Eleven pale slate coloured Biliary Calculi.

Presented by F. Samwell, Esq.

38. Five Calculi from a gall-bladder; one seen in section has almost a black interior.

Presented by F. Samwell, Esq.

39. Numerous Biliary Calculi from a woman, aged 84, who died from peritonitis caused by their presence.

Presented by Dr. Coote.

40. A number of very small pale angular Calculi from a gall-bladder.

Presented by R. Cartwright, Esq.

41. Three irregular shaped Calculi formed of a white basis, and encrusted with a dark brown material.

Presented by Dr. Murchison, F.R.S., 1869.

42. One large oval and two small pale Calculi from a gall-bladder.

43. A large cylindrical Calculus, with flattened or slightly oval ends and a tuberculate surface; also another smaller pale facetted Calculus from a gall-bladder.

44. Eighty-three small, and for the most part pale, facetted Calculi. From a case of cancer of the bile papilla.

Presented by Dr. Sidney Coupland.

45. Three oval Calculi from a gall-bladder; one which is broken shows a crystalline structure.

46. A quantity of black Concretions from a gall-bladder, probably consisting of inspissated bile.

47. A similar but more coherent mass.

48. A Biliary Calculus divided into halves. From a body which had been buried thirty years.

Presented by F. Flower, Esq., 1865.

49. Biliary Gravel.

Presented by Dr. Murchison, F.R.S.

50. One hundred and three Gall Stones, varicgated in colour. From a woman.

Presented by Dr. Goodfellow.

51. Three large Gall Stones, upon which the gall-bladder had contracted, and by pressure on the portal vein produced venous congestion and death.

Vide *Med. Times and Gaz.*, 1866, vol. ii, p. 396.

Presented by Dr. Greenhow, F.R.S.

52. Numerous facetted Biliary Calculi.

53. A large white cylindrical Calculus, with a tuberculated surface; also a smaller calculus which is almost entirely black on section.

54. Twenty-five small angular and one large oval calculus from a gall-bladder.

55. Six Calculi with a black surface and white interior.

56. Five Biliary Calculi from a woman, aged 46.

From a patient under the care of Dr. A. P. Stewart.

Presented by J. H. Casson, Esq.

57. Four brown Biliary Calculi, all fractured, showing a light interior.

58. Fourteen pale stone coloured Gall Stones.

59. A quantity of fine Biliary Gravel, with some gall stones of various sizes.

60. Two large pale oval Calculi, and seven angular wedge-shaped gall stones.

61. A large rough light and porous Calculus, from a gall-bladder.

62. Three small Stones of a similar appearance.

PANCREATIC CALCULI.

63.

URINARY CALCULI.

CALCULI WITH A NUCLEUS OF URIC ACID.

CALCULI OF URIC ACID.

64. A Calculus of laminated structure composed of uric acid.

Removed by lithotomy from a man, aged 66. He died eight days after the operation.

Presented by R. Cartwright, Esq.

65. A small oblong Calculus, composed entirely of uric acid. The central portion is compact, the outer part very porous, with a radiate arrangement. The surface is tuberculated.

Presented by R. Cartwright, Esq.

66. Fragments of two Calculi, composed of uric acid.

From a man, aged 60. They were found after death adherent to the mucous membrane of the bladder by fibrous pedicles.

Reported by Mr. Shaw in *Trans. Path. Soc.*, vol. vi.

67. A flattened oblong Calculus, said to be composed entirely of uric acid.
Removed by lithotomy from a boy, aged 5.
Presented by A. Shaw, Esq., 1859.

68. Sections of a Uric Acid Calculus.
Presented by E. H. Ambler, Esq., of Hemel Hempstead.

69. Section of a Uric Acid Calculus, with a constriction near its centre.
Presented by E. H. Ambler, Esq., of Hemel Hempstead.

70. Section of a Uric Acid Calculus, which weighed 240 grains.
Presented by A. Shaw, Esq.

71. A Uric Acid Calculus, removed by lithotomy from a boy aged 6 years.
Presented by T. W. Nunn, Esq.

72. A Uric Acid Calculus, extracted from a boy aged 4 years.
Presented by R. B. Bakewell, Esq.

73. A small oval Uric Acid Calculus.
Presented by A. Shaw, Esq.

74.

75.

Calculi having Two Layers.

URIC ACID, URATE OF AMMONIA.

76. Half of a large Calculus, composed of porous uric acid with a little urate of ammonia.
Extracted by Percival Pott, Esq.

77. Half of a large Calculus, composed of uric acid with very small traces of urate of ammonia.
From the Collection of Mr. Shaw.

78. A Calculus. The nucleus is composed of uric acid and urate of lime, followed by a porous layer of uric acid, the exterior consisting of urate of ammonia.

URIC ACID, OXALATE OF LIME.

79. Two Calculi. They are composed of oxalate of lime with a uric acid nucleus.
Found in the kidney of a woman, aged 63, who died after an operation for strangulated hernia, 9th March, 1859.

80. Half of a large Calculus. The nucleus and external portion consist of uric acid, with an intermediate layer of oxalate of lime.

URIC ACID, EARTHY PHOSPHATES.

81. A Calculus, composed of uric acid, with a thin covering of phosphates on the surface.
From the bladder of a man, aged 60. A portion had been broken off during life by a lithotrite; cystitis came on after the operation and caused death. The thin deposit of phosphates must have taken place subsequent to the operation.

82. A compact Calculus, composed of uric acid with a thin coating of triple phosphate.

From a native of India, aged 40.

Extracted and presented by C. M. Sissmore, Esq.

83. Two Calculi, with nuclei of uric acid surrounded by fusible calculus.

Removed from a boy by lithotomy, 8th March, 1865.

Presented by C. Moore, Esq.

84. Fragments of a Calculus, composed of mixed phosphates with some uric acid.

From a boy, aged 9. It was removed by Mr. Erichsen.

Presented by W. H. Ayling, Esq.

85. A Calculus, composed as follows: the centre is uric acid, followed by phosphate of lime, mixed phosphates, and phosphate mixed with uric acid.

Presented by R. Cartwright, Esq.

86. A Calculus, compact in the centre, where it is composed of uric acid; externally it is porous, and consists of a thin crust of phosphate and oxalate of lime mixed.

From the bladder of a girl, aged 7.
Surg. Reg., 1858, No. 316.

Presented by C. H. Moore, Esq.

87. Half of a small Calculus, composed chiefly of triple phosphates, with a nucleus of uric acid.

Presented by J. M. Arnott, Esq., F.R.S.

88. A Calculus, with a nucleus composed of urate of ammonia mixed with uric acid, succeeded by pure uric acid, with a thin coating of phosphate of lime. It weighed 46 grains.

Extracted from a boy, aged 5, by Mr. Shaw. The patient recovered.

89.

URIC ACID, URATE OF AMMONIA, AND EARTHY PHOSPHATES.

90.

URIC ACID, OXALATE OF LIME, AND EARTHY PHOSPHATES.

91. A small Calculus, composed of uric acid, oxalate of lime, and fusible calculus.

Presented by R. Cartwright, Esq.

92. A small Calculus. The nucleus is composed of uric acid, succeeded by a layer of oxalate of lime, and covered externally by pure phosphate of lime of a fine crystalline radiating structure. The exterior is smooth, white, and sparkles with minute crystals.

Presented by R. Cartwright, Esq.

93. A Calculus, with uric acid nucleus, succeeded by oxalate of lime, and followed by a thick layer of triple phosphates mixed with uric acid.

Presented by R. Cartwright, Esq.

94. A Calculus. The nucleus consists of uric acid, surrounded by oxalate of lime, with a thin external covering of phosphate of lime and uric acid mixed.

From the bladder of an old man after death.

95. A Calculus, consisting of a nucleus of uric acid, succeeded by oxalate of lime, then fusible calculus.

From a boy, aged 14, on whom Mr. De Morgan performed lithotomy in 1859. He recovered.

96. A Calculus, composed of a nucleus of uric acid, followed by oxalate of lime and triple phosphates.

97.

URIC ACID SUCCEEDED BY FOUR OR MORE LAYERS.

98. Half of a large Calculus, composed as follows: From the centre outwards, uric acid, urate of ammonia, oxalate of lime a very thin layer, porous, and compact uric acid; these make up the bulk of the stone. The other half is in the Museum of the College of Surgeons. Weight three ounces and three-quarters.

From a patient, aged 15.

Presented by Mitchell Henry, Esq.

Vide *Path. Soc. Trans.*, vol. ix, p. 342.

99.

CALCULI WITH A NUCLEUS OF URATE OF AMMONIA.

CALCULI CONSISTING MAINLY OF URATE OF AMMONIA.

100. A Calculus, composed of urate of ammonia. Removed by lithotomy.

Presented by J. M. Arnott, Esq., F.R.S.

101. Half of a Calculus, about the size of a pigeon's egg, composed of urate of ammonia.

From Mr. Shaw's Collection.

102.

URATE OF AMMONIA. OXALATE OF LIME.

103. Five small Calculi, consisting of urate of ammonia covered with oxalate of lime.

From the bladder of a boy, aged 8 years. One of them had become impacted in the urethra, and was cut down upon by Mr. Henry, and the other calculi were taken from the bladder by the same opening. The patient soon recovered. 1858.

104. A small Calculus. The nucleus and external portions consist of urate of ammonia, with alternating layers of that substance with oxalate of lime between.

From a boy, aged 8 years. Lithotomy was performed by Mr. Nunn.

105. A small Calculus. Its exterior is finely tuberculated. It consists of oxalate of lime on a nucleus of urate of ammonia.

Removed from a boy, aged 7 years, by Mr. Moore. The patient recovered. It weighed 120 grains.

URATE OF AMMONIA, EARTHY PHOSPHATES.

106.

Calculi having Three Layers.

URATE OF AMMONIA, URIC ACID, EARTHY PHOSPHATES.

107.

URATE OF AMMONIA, URIC ACID, OXALATE OF LIME.

108. Half of a large Calculus. It is composed of a nucleus of urate of ammonia with a compact and laminated layer of uric acid, with a thin external coating of oxalate of lime. It weighed eleven drachms one scruple.

Removed from a boy, aged 15, by Mr. Arnott, September, 1842, by lithotomy. Symptoms of stone had existed for nine years.

Presented by J. G. Forbes, Esq.

URATE OF AMMONIA, OXALATE OF LIME, EARTHY PHOSPHATES.

109.

URATE OF AMMONIA SUCCEEDED BY FOUR OR MORE LAYERS.

110.

CALCULI WITH A NUCLEUS OF OXALATE OF LIME.

CALCULI OF OXALATE OF LIME.

111. A small elongated Calculus, composed of oxalate of lime.

From a boy, aged 11. Lithotomy.

Presented by J. M. Arnott, Esq., F.R.S.

112. An Oxalate of Lime Calculus (uncut).

From a boy, aged 5.

Presented by J. M. Arnott, Esq., F.R.S.

113. An Oxalate of Lime Calculus.

Presented by C. De Morgan, Esq., F.R.S.

114. A Mulberry Calculus.

115. Section of a small Calculus, composed chiefly of oxalate of lime.

From the Collection of Mr. Shaw.

Calculi having Two Layers.

OXALATE OF LIME, URIC ACID.

116.

OXALATE OF LIME, EARTHY PHOSPHATES.

117. A Calculus, composed internally of oxalate of lime, surrounded by phosphate of lime, with a thin coating of triple phosphate.

From a native of India. Lithotomy was performed, and the patient recovered.

118. A small oblong tuberculated Calculus, composed of oxalate of lime, followed by phosphate of lime, and its exterior has a very sparkling crystalline appearance.

Presented by R. Cartwright, Esq.

119. Fragments of a Calculus. There is an oval slightly tuberculated nucleus about the size of a large pea, consisting of oxalate of lime; this is surrounded by a light porous dark coloured substance, probably oxalate of lime mixed with blood; then hard laminated crystalline and tuberculated oxalate of lime, and externally a coating of fusible phosphates. It weighed four ounces.

From a boy, aged 13. It broke into pieces during extraction. Patient recovered.

Presented by C. De Morgan, Esq., F.R.S.

Calculi having Three Layers.

OXALATE OF LIME, URIC ACID, URATE OF AMMONIA.

120.

OXALATE OF LIME, URIC ACID, EARTHY PHOSPHATES.

121. A very large oval Calculus. Its nucleus is composed of oxalate of lime, followed by uric acid, and coated externally by fusible calculus.

Presented by R. Cartwright, Esq.

122. A small spherical Calculus (uncut), composed of oxalate of lime, coated with fusible calculus, mixed with uric acid.

From a boy, aged 8, on whom Mr. Henry performed lithotomy, 1859.

OXALATE OF LIME SUCCEEDED BY FOUR OR MORE LAYERS.

123.

CALCULI OF CYSTIC OXIDE (CYSTINE).

124. Part of a Calculus composed of Cystic Oxide, with some phosphate of lime.

From the Collection of Mr. Shaw.

125. A large oval Calculus of Cystic Oxide.

Presented by George Lawson, Esq.

CALCULI OF PHOSPHATE OF LIME.

126.

CALCULI OF PHOSPHATE OF MAGNESIA AND AMMONIA.

127.

CALCULI OF PHOSPHATE OF LIME AND PHOSPHATE OF MAGNESIA AND AMMONIA (FUSIBLE CALCULUS).

128. Half of a round Calculus which is composed entirely of mixed phosphates.

Presented by J. M. Arnott, Esq., F.R.S.

129. A Fusible Calculus of irregular shape.

130. A broken mass of Fusible Calculus, weighing 7 drachms 24 grains.

Removed by lithotomy from a Scotch gamekeeper by Mr. C. De Morgan, 1854.

131.

CALCULI DEPOSITED ON FOREIGN BODIES.

132. A Hair-pin encrusted with phosphates.

Extracted from the bladder of a girl, aged 15, by Mr. Moore, about 1850.

133. A Rush encrusted with phosphates. It had probably been used as a bougie, and had broken in the bladder.

From the Collection of Mr. Shaw.

134. The end of a Catheter encrusted with earthy phosphates.

It had been kept in the bladder for five days in a case of lacerated urethra.

From the Collection of Mr. Shaw.

135. A Hair-pin encrusted with phosphatic deposit.

From the bladder.

136. A piece of Sealing-Wax, completely doubled upon itself by the contraction of the coats of the bladder, and without any deposition of phosphates upon it, although they were voided abundantly in the urine.

From the bladder of a man, aged 42, who had been in the habit of passing a sealing-wax bougie, about three inches of which broke off and remained in the bladder seventeen days, causing much irritation. It was extracted by the operation of lithotomy by Mr. Moore. The indentation in its side was caused by the instrument used in its extraction.

137. A piece of Slate Pencil covered with a thick deposit of phosphates.

From the urethra of a man, aged 45.

Presented by C. A. Moore, Esq.

138. A piece of Gum Elastic Catheter in a similar condition.

139. Phosphatic deposits on hairs.

From the bladder.

140. A similar specimen.

OXALATE OF LIME AND URATE OF AMMONIA.

141. Two small Calculi. They are composed of oxalate of lime and urate of ammonia in alternating layers, having a hollow space in the centre. The original nucleus was probably a clot of blood.

Passed by the urethra of a man.

Presented by Dr. Goodfellow.

CALCULI FROM THE KIDNEY.

142. Fragment of a Calculus, composed of triple phosphate with a small quantity of phosphate of lime.

From the left kidney of a man.
Vide *Path. Soc. Trans.*, vol. xix, p. 278.

143. A number of small round Calculi, some of which resemble globules of metallic mercury, from a kidney and ureter. Removed post-mortem.

Vide *P. M. Reg.*, 1860.

144. A fusible Calculus from a kidney.

145. A small Renal Calculus.

From a patient under the care of Dr. Henry Thompson, June, 1860.

146. A branched Calculus, probably consisting of uric acid, from the pelvis of a kidney.

147. A branched Calculus from a kidney.

148. A similar specimen.

For other specimens of renal calculi, *vide* Series XXX, Nos. 1787–1800.

149.

PROSTATIC CALCULI.

CALCULI FROM THE PROSTATE GLAND.

150. A Prostatic Calculus

From an old man, a dissecting-room subject.
Vide Series XXVIII, No. 1717.

151.

FRAGMENTS OF CALCULI PASSED AFTER LITHOTRITY.

152. Fragments of a Calculus, composed of uric acid.

Crushed by lithotrity.
From the Collection of Mr. Shaw.

153. One large, and a great number of small fragments of a Calculus. The smaller fragments were removed by lithotrity, the larger one post-mortem. The prostate was much diseased.

Presented by Campbell De Morgan, Esq., F.R.S., 6th November, 1865.

154.

155.

CALCULI REMOVED FROM OR PASSED BY THE URETHRA.

156. A small Calculus, composed of oxalate of lime.

Passed by the urethra of a woman, a night nurse in the Hospital.

Presented by J. G. Forbes, Esq.

157. A small Calculus. It is composed of oxalate of lime.

Passed through the urethra of a man.

Presented by J. G. Forbes, Esq.

158. A section of a small Calculus. It is composed of a nucleus of urate of ammonia covered with oxalate of lime.

Extracted from the urethra of a lad, aged 17 years.

Presented by J. M. Arnott, Esq., F.R.S.

159. Uric acid Calculi.

They were passed through the urethra by a middle-aged female.

Presented by S. W. Sibley, Esq.

160. A Calculus passed through the urethra by a man, aged 60.

Presented by T. W. Nunn, Esq.

161. "Brasse modell of a Calculus, voided by the urethra of a man in Cheshire, which tore the passage so as that he after laboured of an incontinency of urine."

Sloanian M.S. Fol. Catal., Brit. Museum, 1831.

162. A small oblong Calculus, composed chiefly of uric acid, with a thin layer of oxalate of lime near the surface.

Passed through the urethra of a woman.

Presented by S. W. Sibley, Esq.

163. A small Urate of Ammonia Calculus.

Removed from the urethra, where it had become impacted.

Presented by J. M. Arnott, Esq., F.R.S.

164. A small Calculus, composed of uric acid.

Picked out of the urethra of a Child six months old.

Presented by J. M. Arnott, Esq., F.R.S.

165. A very small Calculus, composed of uric acid.

From the urethra of a boy, aged 4 years.

Presented by J. M. Arnott, Esq., F.R.S.

166. A Uric Acid Calculus, passed with the urine.

Presented by T. Clayton, Esq.

167. Calculus passed through the urethra of a child.

Presented by J. R. A. Douglas, Esq.

CALCULI OF ANIMALS.

168.

CASTS OF URINARY CALCULI.

169. Cast of a Calculus, which weighed fifteen ounces.

Removed by Mr. Fuge, of Plymouth, June, 1836. The patient was living in 1855.

Presented by C. H. Moore, Esq.

170. Casts of two large Calculi. The larger weighed thirteen and three-quarter ounces; the smaller, eight and a half ounces.

From a bladder after death.

Path. Soc. Trans., vol. xxi, p. 271.

Presented by Campbell De Morgan, Esq., F.R.S.

171.

172.

CONCRETIONS FROM HYDATID CYSTS.

173. Calcareous Matter from a hydatid cyst of the liver. There were other hydatids in the liver, omentum, and recto-vaginal region.

SERIES XLII.

CASTS AND MODELS OF DISEASED OR INJURED PARTS.

INJURIES AND DISEASES OF THE SKIN.

1. A cast of a right Arm, showing contraction of the skin subsequent to a severe burn about the flexure of the elbow joint.

2. Cast of the Arm of a Malingerer, with the hand artificially bent upon the forearm.

3. Cast of the Arm and Hand of a Malingerer, much wasted, from tight bandaging, with the fist closed in order to simulate the appearance of an amputation stump.

4. Cast of a right Foot, showing contraction caused by a perforating ulcer of the big toe. The toes are all pointed almost directly outwards, with a slight inclination backwards. The scar of the ulcer is seen over the front of the great toe.

Presented by J. W. Hulke, Esq., F.R.S.

5. Wax model of a right Hand, showing the eruption of baker's itch (Psoriasis diffusa dorsi manûs: Sir E. Wilson's Catalogue). From a baker, aged 26. The eruption was of ten years' duration.

Presented by Sir Erasmus Wilson, F.R.S.

6. Wax model of the Skin of the Loin affected with lichen agrius.

Presented by Sir Erasmus Wilson, F.R.S.

7. Wax model of the crown of a Child's Head affected with impetigo capitis.

Presented by Sir Erasmus Wilson, F.R.S.

8. Wax model of the Arm of a girl, aged 14, affected with psoriasis.

9. A similar model from the same case.

Presented by Sir Erasmus Wilson, F.R.S.

10. Wax model of the side of the body of a man, showing an eruption of herpes.

Presented by Sir Erasmus Wilson, F.R.S.

11. Wax model of the Skin of the upper part of the left Thigh, showing the eruption of herpes circinnatus.

Presented by Sir Erasmus Wilson, F.R.S.

12. Wax model of a patch of Keloid, affecting the front of the chest, in an early stage.

Presented by Sir Erasmus Wilson, F.R.S.

13. A similar model, representing a similar patch in a more advanced stage.

Presented by Sir Erasmus Wilson, F.R.S.

14. Wax model of the Breast of an infant, showing the eruption of vaccinia.

Presented by Sir Erasmus Wilson, F.R.S.

15. Three casts of portions of the Arm, showing small-pox vesicles in different stages of development. The disease has been modified by vaccination.

16. A similar set of specimens.

17. Wax model of the Forearm of a woman, aged 36, affected with variola.

Presented by Sir Erasmus Wilson, F.R.S.

18. A similar model, showing a confluent stage of the eruption.

Presented by Sir Erasmus Wilson, F.R.S.

19. A wax model of the Face, showing the eruption of variola confluent. Taken on the tenth day.

Presented by Sir Erasmus Wilson, F.R.S.

19A. A similar model, showing the condition on the twelfth day.

Presented by Sir Erasmus Wilson, F.R.S.

20. Wax model of a portion of the Breast, from a man aged 27, showing the eruption of lichen syphiliticus.

Presented by Sir Erasmus Wilson, F.R.S.

21. A wax model of an Arm, showing the eruption of lichen syphiliticus.

22. Cast of the Head and Shoulders of a woman affected with lupus of the face. The disease has destroyed the greater part of the nose, lips, eyelids, and eyeballs.

23. Wax model of the Face of a man, aged 30, showing the eruption of rupia prominens.

Presented by Sir Erasmus Wilson, F.R.S.

24. Model of the side of the Face of the same subject, showing a similar eruption.

Presented by Sir Erasmus Wilson, F.R.S.

25. Wax model of the Arm of a youth, aged 18, affected with syphilitic impetigo.

Presented by Sir Erasmus Wilson, F.R.S.

26. A model of a portion of a Thigh, in wax, from a case of rupia.

27. Wax cast of the Skin of the left Groin of a woman, aged 20, showing the eruption of lepra vulgaris with the scales removed.

Presented by Sir Erasmus Wilson, F.R.S.

28. Wax model of the Face of a woman affected with lupus of the nose (Noli me tangere: Sir E. Wilson's Catalogue).

Presented by Sir Erasmus Wilson, F.R.S.

29. Cast of the Head and Neck of a woman affected with a malignant growth of the face. Enormous masses of the growth project from the right side of the face, and completely distort the features. The right eye is swollen, and the eyelids closed. The growth has extended to the left side of the face, and there are enlarged glands on both sides of the neck.

30. A wax cast of a Hand affected with vitiligoidea tuberosa.

31. Wax model of a case of tinea capitis.

Presented by Sir Erasmus Wilson, F.R.S.

32. Wax model of a Scalp affected with tinea favosa.

Presented by Sir Erasmus Wilson, F.R.S.

33. Wax model of the Skin of a portion of the Back of a youth, aged 20, showing the eruption of acne.

Presented by Sir Erasmus Wilson, F.R.S.

34. Wax model of the Face of a woman, showing disease of the follicles of the skin of the nose.

Presented by Sir Erasmus Wilson, F.R.S.

35. Cast of a remarkable case of elephantiasis of the Scrotum.

From a patient, aged 40. The disease commenced seven years after marriage, after which sexual power was retained for ten years. Subsequently the growth increased rapidly. It weighed sixty pounds.

36. A plaster cast of the lower part of the Abdomen and Legs, showing a scrotum and penis enormously enlarged from elephantiasis.

37. A wax model of a case of elephantiasis of the Scrotum.

38. 39.

40.

INJURIES AND DISEASES OF MUSCLES, TENDONS, AND BURSÆ.

41. Cast of a left Leg, of which the muscles of the calf are enormously developed; the toes are extended, and the foot is in the position of talipes equinus. Probably from a case of pseudo-hypertrophic paralysis in an adult.

42. Cast of a left Foot in a position of talipes varus.

43. A similar specimen.

43A. Cast of the right Foot of a child affected with talipes varus.

43B. A left Foot similarly affected, showing about the same degree of deformity.

43C. A similar specimen, showing a more advanced stage of the same condition.

43D. A similar specimen.

44. Cast of a right Foot, illustrating the deformity of talipes equino-varus.

45. Cast of a left Foot affected with talipes equinus.

46. Cast of a right Foot, illustrating a rather less advanced stage of the same condition.

47. Cast of a right Foot similarly affected.

48. Cast of a right Foot, showing the condition of talipes cavus.

49. Cast of a left Foot similarly affected.

50. Cast of the Leg of a boy affected with genu valgum.

51. Cast of a Hand, showing a ganglion over the wrist joint.

52. Cast of a Hand, showing a diffuse ganglion of the fingers.

53. A cast of both Legs of the same subject, showing enlargement of the bursa over each patella.

54. A cast of a portion of a right Leg, showing an enlarged prepatella bursa.

55. A cast of a left Foot, showing an enlarged bursa over the outer ankle. From a tailor.

Presented by Henry Morris, Esq.

56. Cast of a right Foot, showing a large ulcerated bunion over the base of the great toe.

57. Cast of a left Foot similarly affected.

58. A cast of the right Foot of a woman, showing a bunion over the great toe, with displacement of the toe outwards. The second and third toes are overlying the great toe. These changes resulted from wearing tight boots with pointed toes.

59. A cast of the Foot of a Chinese lady. The foot is very small, and ends in a sharp point, the extremity of the great toe. The other toes are bent under the foot; there is a deep constriction just in front of the heal.

60.

INJURIES OF BONES (Fractures).

61. Cast of a right Hand, showing distortion consequent upon the fracture of the lower end of the radius, "Colles' Fracture."

62. Cast of a right Hand, showing similar changes, but with the distortion less marked.

63. Cast of a part of a Hand and Wrist, much distorted, apparently from the same lesion.

64. Cast of a right Leg, showing a fracture of the patella; the fragments are separated for nearly three inches.

65. Cast of a Knee, flexed at a right angle. The patella has been fractured; the fragments are separated for about two inches.

66. Cast of a Leg, showing a fracture of the patella, with separation of the fragments to the extent of one inch.

67. Cast of a long standing case of fracture of the Patella, showing the wide separation of the fragments in the position of complete flexion of the joint.

68. A cast of a Knee, showing union after the fracture of the patella, with considerable separation of the fragments.

69. A cast of both Knees, illustrating separation of the two patellæ from the ligaments which connected them with the tibiæ.

From a patient under the care of Mr. A. Shaw.

70. A cast of the lower part of a Leg and Foot, showing distortion consequent on a fracture of the fibula, with dislocation of the foot outwards.

71. Cast of the lower part of a Leg and Foot, showing extreme deformity consequent on fracture of the lower end of the fibula, "Pott's Fracture." The swelling above the outer malleolus indicates the spot where there were two loose fragments of bone, which have united.

72. A similar cast, from a case of Pott's fracture, with faulty union. The internal malleolus projects, and there is a depression above the outer malleolus.

73. A cast of the lower part of a left Leg and Foot, showing the distortion resulting from a severe compound fracture of the tibia, with protrusion of the lower end of the bone.

74.

75. Cast of a right Foot, from a case of fracture of the fibula, with displacement of the foot outwards.

76. Cast of a left Shoulder, showing a fracture of the outer third of the clavicle. The inner fragment projects upwards.

77. Cast of the left side of the Skull of a child, showing a depressed fracture of the parietal bone.

78. A wax model, illustrating gangrene of the forearm following fracture and bad setting.

79.

80.

INJURIES OF JOINTS (DISLOCATIONS).

81. A cast of a right Shoulder and part of the Chest, showing a dislocation of the sternal end of the clavicle forwards.

82. A similar cast.

83. Cast of a Shoulder Joint, showing a dislocation of the head of the humerus forwards.

84. Cast of a Shoulder Joint, showing a dislocation of the head of the humerus forwards.

85. Cast of a Shoulder, showing a dislocation of the right humerus.

From Mr. Shaw's Collection.

86. Cast of a Shoulder, showing a sub-spinous dislocation of the head of the humerus. The accident happened eighteen years previously to the cast being taken.

87. Dislocation of the Head of the left Humerus into the axilla with comparatively little swelling.

The five following specimens consist of the bones of the shoulder joint fixed in the positions of the undermentioned dislocations :—

88. Subcoracoid after Malgaigne.
89. Subspinous.
90. Subglenoid.
91. Intracoracoid after Malgaigne.
92. Subclavicular after Malgaigne.

Presented and arranged by W. H. Flower, Esq., F.R.S.

93. Cast of a Shoulder, from a case of separation of the upper epiphysis of the humerus.

From a child.

94. A cast of a right Forearm and Hand, showing the distortion produced by a dislocation of the radius and ulna on to the dorsum of the hand.

95. A cast of a portion of a left Hand, showing a dislocation of the thumb. The first phalanx is overlying the head of the metacarpal bone.

96. A cast of a portion of a Hand, showing a dislocation of the thumb.

97. A cast showing a case of dislocation of the right thumb.

98. A cast of part of a right Hand, showing a dislocation of the thumb at the metacarpo-phalangeal joint.

99. A cast of a Leg, showing a subluxation of the Knee Joint due to necrosis of the tibia.

100. A cast of a right Knee Joint, showing a dislocation of the patella outwards.

101. A similar cast, with the deformity more marked.

102. Cast of a left Foot, showing a dislocation of the astragalus outwards. The bone was removed by operation.

From a patient under the care of Mr. Arnott.

103. A cast of a right Foot, showing a dislocation of the astragalus outwards.

104. A cast of a right Foot, from a case of dislocation of the astragalus inwards. The dislocation could not be reduced, so the bone was removed by operation.

105.

106.

DISEASES OF BONES.

107. Cast of the Skull and Lower Jaw, showing a peculiar disease of the cranial bones (Mr. Bickersteth's case).

Vide Series V, No. 529; Series XLIII, No. 4.
Path. Soc. Trans., vol. xvii, p. 243.

Presented by Dr. Murchison, F.R.S.

108. A cast of the right Leg of a boy, aged 20, affected with late rickets. The deformity appeared after MacEwen's operation for genu valgum.

109. The left Leg of the same boy.

Presented by George Lawson, Esq.

110. A cast of a remarkably deformed Foot with only two toes.

111. Cast of a right Leg, from a case of genu valgum.

From a boy, aged 19.

Presented by Henry Morris, Esq.

DISEASES AND DEFORMITIES OF THE SPINE AND THORAX.

112. Cast of a Skull from a case of hydrocephalus.

Vide Series V, No. 345.

112A. A similar specimen.

112B. Ditto.

113. Plaster cast of the Head of a man showing osteitis deformans affecting the lower jaw.

Vide Series V, No. 387.

114. A cast of a Thorax, presenting a remarkable deformity of the sternum about the ensiform cartilage, which is depressed to such an extent that a hollow is formed in which the doubled fist can be placed.

115. A cast of a Thorax, presenting an angular curvature of the spine in the mid-dorsal region.

116. A cast of a Thorax, showing an angular curvature of the spine in the mid-dorsal region, less advanced than in the preceding specimen.

117. A similar specimen, showing a curvature in the upper dorsal region.

118. A cast of a Thorax, showing a slight degree of angular curvature in the upper dorsal region.

119. A similar specimen, showing an angular curvature in the mid-dorsal region.

120. A cast of a Back, showing a lateral curvature of the spine.

121. A similar cast, showing a more advanced stage of the same disease.

122. A cast of a Thorax, showing extreme lateral curvature of the spine in the mid-dorsal region.

123. A cast of the Back, from a case of advanced curvature of the spine.

124. A cast of the Back, from a case of spinal curvature.

125.

126.

DISEASES OF JOINTS.

127. Cast of the Knee Joint of a child affected with pulpy degeneration of the synovial membrane.

128.

DISEASES OF THE BRAIN AND SPINAL CORD, AND NERVES.

129. Wax cast of a Brain, sliced horizontally, showing an extensive abscess of the cerebral hemisphere.

130.

DISEASES OF THE ARTERIES AND VEINS.

131. Cast of part of the Hand of a man, showing a prominent erectile tumour at the base of the thumb, of thirty years' standing.

Vide No. 2241.

132. A Varix, connected with the internal Saphena Vein.

133. A cast showing Varicose Veins of the Legs.

DISEASES OF THE NOSE, MOUTH, TONGUE, AND TEETH.

134. A plaster cast of a Hard and Soft Palate.

From a girl, aged 18, who had a wide cleft of the soft and hard palate extending to the pre-maxillary bone. Staphyloraphy and uranoplasty were performed 30th December, 1872. The soft palate and front part of the hard palate united, but an opening remained between them, which was afterwards closed.

Vide Mr. Hulke's *Case Book*, vol. xxiv, p. 78.

135. A cast of the Roof of the Mouth with the Soft Palate.

From a girl, aged 13, who had cleft of the soft and hard palate extending forwards to the level of the second bicuspid tooth. On 3rd April, 1872, staphyloraphy and uranoplasty were performed, resulting in union of the soft and part of the hard palate. An opening remained at the junction of the hard and soft palate, which was subsequently closed.

Vide Mr. Hulke's *Case Book*, vol. xviii, p. 167.

136. A cast of the Palate from the same case after the operation.

137. A cast of the Hard and Soft Palate.

From a girl, aged 17, who had a cleft of the soft and hard palate reaching forwards to the posterior extremity of the pre-maxillary bone. On 1st March, 1871, staphyloraphy and uranoplasty were performed. A minute aperture remained, which was subsequently closed.
Vide Mr. Hulke's *Case Book*, vol. vii, p. 115.

138. A cast of the Roof of the Mouth from a case of cleft palate.

From a girl, aged 13, who had harelip running into the right nostril, and cleft palate. The pre-maxilla was distorted. It contains the two left and the right central incisor. Speech was hardly intelligible. 26th April, 1872, staphyloraphy and uranoplasty were performed. On the 29th, after much coughing, the line of union began to gape, and six days later union had failed along the entire tract. The harelip was closed later.
Vide Mr. Hulke's *Case Book*, vol. xvii, p. 14.

139. A plaster cast of the Hard and Soft Palate.

From a girl, aged 3 years and 5 months, who had a cleft in the soft palate. On 10th May, 1871, staphyloraphy was performed. Union perfect. She had been previously operated on for harelip.

140. A plaster cast of the Hard and Soft Palate.

From a boy, aged 9½ years, who had a cleft through the soft and half of the hard palate. Staphyloraphy was performed 19th July, 1871; good union. On 1st November, 1871, uranoplasty was performed, with complete success.
Vide Mr. Hulke's *Case Book*, vol. xii, p. 77.

141. A plaster cast of the Roof of the Mouth from the preceding case, to show the result of the operation.

142. A plaster cast of the Hard Palate.

From a girl, who had undergone three previous operations for closure of the cleft in the palate. Mr. Hulke performed uranoplasty, 3rd August, 1871, with partial success. On 6th November, 1871, an unsuccessful attempt was made to close a small opening which remained from the last operation. Later she underwent two operations at St. George's and St. Thomas's Hospitals. When seen in December, 1872, she had a capillary opening at the junction of the hard and soft palates.
Vide Mr. Hulke's *Case Book*, vol. xi, p. 52; and vol. xxiv, p. 51.

143. A cast from the same case, showing the result of previous operations.

144. A cast of the Roof of the Mouth and Soft Palate.

From a boy, aged 13, who had a cleft through the soft palate. Staphyloraphy was performed, 22nd September, 1873. Union perfect.
Vide Mr. Hulke's *Case Book*, vol. xxxi, p. 24.

145. A similar cast.

From a patient, aged 17, who had cleft of the hard and soft palate reaching to the pre-maxillary bone. On 12th September, 1874, staphyloraphy and uranoplasty were performed. Union took place, except a capillary aperture at the junction of the hard and soft palate.
Vide Mr. Hulke's *Case Book*, vol. xl, p. 134.

146. A coloured plaster cast of a Hard Palate, showing an Epulis growing on the gum.

147. A cast of a Face, showing the distortion produced by a tumour of the antrum.

148. A cast of the same Face after the removal of the tumour.

149—166. A series of Plaster Casts, showing various degrees of the deformity known as cleft palate.

DISEASES OF THE LUNGS.

167. A wax cast, showing one-half of the Lung in a case where a cancerous growth surrounded and involved the root of the organ.

Vide Series XVIII, No. 1315.

168. Coloured wax cast of part of Lung, showing commencing gangrene.

169. Wax model of portion of Lung infiltrated with miliary tubercle.

170. Wax model of a portion of Lung consolidated from inflammation.

171. A similar model, showing Lung in the state of grey hepatization.

172. Wax model of a Lung, a portion of which is in a state of gangrene.

173. Wax model of a portion of Lung containing an abscess.

174. Wax model of a portion of Lung infiltrated with cancerous nodules.

175. Wax model of portion of Lung, infiltrated with caseous tubercle undergoing softening.

From a scrofulous subject.

176. Wax model of a portion of Lung infiltrated with "concrete" (?) tubercle.

177. Wax model of a portion of Lung "after acute phthisis."

All presented and modelled by H. B. Tuson, Esq.

178.

DISEASES OF THE STOMACH AND INTESTINES AND LIVER.

179. Coloured plaster cast of a Liver, enormously enlarged from secondary cancerous growths.

180. A plaster cast, overlaid with wax, illustrating constriction of the hepatic flexure of the Colon, with consequent distension of the cæcum and small intestine. There was acute peritonitis.

Prepared by Sir C. Bell.

181. Cast of the Intestines, from a case of strangulated hernia, showing the appearance of the reduced bowel after death, which was due to peritonitis.

From Sir Charles Bell's Collection.

182. A large Scrotal Hernia.

183. Cast of the lower part of the Trunk and upper part of the Legs, from a case of left femoral hernia, associated with fracture of the neck of the right femur.

184. Cast of a case of Ventral Hernia.

DISEASES OF THE TESTICLE AND ITS COVERINGS AND THE SCROTUM.

185. Cast of a case of double hydrocele of the tunica vaginalis.

186. Cast of a case of incomplete descent of the Testis, complicated with cancer of that organ.

187.

188.

189.

DISEASES OF THE KIDNEY, BLADDER, URETHRA, AND PENIS.

190. A cast, showing the conditions of the parts concerned in Epispadias.

191. A similar specimen.

192. Eversion of the male Urinary Organs, with malformation of the Penis.

193. A plaster cast of a Fœtus, showing extroversion of the male bladder.

194. A wax model of the external Organs of Generation in the female, showing malformation of the vagina.

195. A similar model, showing the Vagina with a narrow orifice divided by a septum.

196. An imperfect Penis concealed between the divisions of the scrotum.

197. A wax model, showing the Penis concealed within the scrotum.

198. A wax model, showing a penis-like condition of the Clitoris.

198A. Cast of the Body of a girl, showing the enlargement of the abdomen caused by the presence of tumour of the kidney.

Vide Series XXX, No. 1827.

DISEASES OF THE UTERUS.

199. A wax model representing extreme prolapse of the Uterus, the surface of which has become ulcerated from pressure.

200. Ten wax models of the Os Uteri and upper part of the Vagina, illustrating varieties of uterine polypi. In one case.

Presented by H. B. Tuson, Esq.

201. Wax models illustrating affections of the Os Uteri, modelled in wax by Mr. Tuson from cases occurring at University College Hospital under the care of Dr. E. W. Murphy.

Each separately labelled.

Presented by H. B. Tuson, Esq.

202. A wax model, showing prolapse of the Uterus.

203. A similar specimen.

DISEASES OF THE LYMPHATIC AND OTHER GLANDS.

204.

DISEASES AND INJURIES INCIDENTAL TO GESTATION AND PARTURITION.

205. A coloured plaster cast, showing a Double Uterus and Vagina Duplex, one of the horns of the uterus containing a fœtus, at about the fifth month.

206.

207. 210. 208. 211. 209. 212. Six Fœtal Heads, variously misshapen from pressure of the forceps applied to effect delivery.

DISEASES OF THE MAMMARY GLAND.

213. A coloured wax model representing the Mammary Gland and its Ducts distended with secretion.

214. Wax model of a large Cystic Sarcoma of the Mammary Gland.

The patient was under the care of Mr. De Morgan.
Vide Series XVIII, No. 14.
The cast was prepared by Mr. Tuson.

215. A plaster cast, showing enormous development of the Breasts in a girl, aged 19.

They were subsequently removed by Sir William Ferguson at King's College Hospital, after the weight of the growths had converted their attachments to the chest wall into thin pedicles consisting of but little more than the skin.

216. Wax model of a Mammary Gland, showing cancerous ulceration.

217. Wax model of a Breast affected with scirrhous cancer. There are numerous small nodules in the skin. The nipple is retracted.

218. Wax model, showing sections of a male Breast enormously enlarged from the presence of a malignant growth, consisting of a fibrous looking matrix, with numerous areas of yellow softening and suppuration scattered throughout it. About the centre a large cavity has formed.

219. Wax model of a Breast infiltrated with carcinoma.

220. Wax model of a Breast, showing a sarcomatous growth.

221. Wax model of a Breast, showing a cystic tumour.

222. Wax model of a Breast, showing a simple cystic tumour.

223. A similar specimen.

224.

CASTS OF STUMPS AFTER THE AMPUTATION OF LIMBS.

225. Cast of a Stump after amputation at the shoulder joint.

226. A Cast of a Stump after amputation of the humerus immediately below the surgical neck. The patient could move the head of the bone.

The operation was performed many years before in India.

227. A Stump after "Teale's" amputation below the knee.

228. A Stump after amputation at the knee in a girl 7 years' old. The patella left *in situ*.

229. A conical Stump after amputation in the lower third of the leg.

230. Stump after amputation of the thigh.

231. Cast of a Stump after Chopart's amputation.

232. Amputation of the Tarsus and Phalanges of the four smaller toes of the left foot in consequence of severe gunshot injury.

233. A wax model of a Leg, showing the stump left after gangrene of the foot, due to frost bite.

TUMOURS AND ALLIED MORBID GROWTHS.

234. Wax model of a Leg, showing a tumour of uncertain nature affecting the calf. The growth on section is of a deep purplish-black tint. The leg was amputated.

Presented by F. Samwell, Esq.

235. Section of the Stump of the same leg after re-amputation, showing the same appearances as the original growth.

Presented by F. Samwell, Esq.

236. A wax model of a Myeloid Sarcoma connected with the scapula.

Vide Series V, No. 559.

237. A wax model showing a section through the lower end of a Femur affected with medullary cancer.

238. Wax model showing an Epithelioma growing from the nose.

239. A wax model of an Epitheliomatous Growth affecting the right inferior maxilla.

240. A wax model of an Epitheliomatous Growth on the right cheek of a man.

241. Plaster bust of a Negro, showing an enormous cancerous growth affecting the left side of the face.

242. Plaster cast of the lower part of the Trunk and Limbs, showing a large sarcomatous tumour affecting the inner part of the left thigh.

243. Plaster cast, showing an enormous Tumour growing from the left buttock, and involving the right also.

From the Cancer Hospital, Westminster.

244. Cast of a Fœtus, showing a large lobulated tumour of the sacrum.

245. A similar specimen.

246. Wax model of a Lung, showing two syphilitic gummata; one is large and has an ulcerated surface, the other is much smaller and has not yet broken down.

247.

MISCELLANEOUS SPECIMENS.

248. A cast of the right Arm of the celebrated prize-fighter Jackson, showing enormous muscular development.

He died eventually of phthisis.

249. A cast of the Leg of a young person, showing the ill effects of tight bandaging.

250. A cast of a right Foot and the lower part of the Leg of an infant, showing two deep grooves the result of constriction by cords.

SERIES XLIII.

DRAWINGS OF DISEASED AND INJURED PARTS.

INJURIES AND DISEASES OF THE SKIN.

1. The Back of a man, showing a large surface of the skin loose, hypertrophied, and covered with hair, a hairy mole. Over the dorsum of the right scapula there is a fungus-looking mass of epithelioma.

Vide *Path. Soc. Trans.*, vol. xxiv, p. 256.

INJURIES AND DISEASES OF MUSCLES, TENDONS, AND BURSÆ.

2.

INJURIES OF BONES (FRACTURES).

3. Photograph of a specimen of longitudinal fracture of the Femur. From the Lyons Museum.

Presented by Henry Morris, Esq.

DISEASES OF BONES.

4. Lithograph drawing of the Skull of a peculiar case, presenting disease of the cranial bones. Mr. Bickersteth's case.

Presented by Dr. Murchison, F.R.S.

5. Another view of the same Skull.

Vide Series V, No. 529; Series XLII, No. 107; *Path. Soc. Trans.*, vol. xvii, p. 243.

Presented by Dr. Murchison, F.R.S.

6. Four views of a case of Double Hand.

Presented by Jardine Murray, Esq.

7. Photograph of the Arm and Hand of a woman, from whom four years previously the greater part of the radius and ulna had been removed for myeloid sarcoma of the former bone. The hand is holding a threaded needle. The patient had a useful hand and was able to sew.

Vide Series V, No. 562.

Presented by Henry Morris, Esq.

DISEASES OF JOINTS.

8.

DISEASES AND DEFORMITIES OF THE SPINE.

9.

DISEASES OF THE BRAIN, SPINAL CORD, AND NERVES.

10.

DISEASES OF ARTERIES AND VEINS.

11.

DISEASES OF THE NOSE, MOUTH, TONGUE, AND TEETH.

12. } Two views of a Tongue affected with epithelioma, which had become
13. } engrafted on a patch of ichthyosis.

Presented by Henry Morris, Esq.

DISEASES OF THE LUNGS.

14.

DISEASES OF THE STOMACH AND INTESTINES.

15. Five drawings in one frame of the Œsophagus and Stomach, from a case of corrosive poisoning.

DISEASES OF THE LIVER.

16. A drawing of a portion of a Liver affected with acute yellow atrophy.

Reported by Dr. Cayley, in *Path. Soc. Trans.*, vol. xxxiv, p. 127.

DISEASES OF THE LYMPHATIC AND OTHER GLANDS.

17.

DISEASES OF THE TESTICLE AND ITS COVERINGS.

18.

DISEASES OF THE URETHRA AND PENIS.

19.

DISEASES OF THE UTERUS.

20. Four frames containing thirty drawings of affections of the Os Uteri. Taken from cases at University College Hospital, under the care of Dr. E. W. Murphy, drawn by H. B. Tuson, Esq.

DISEASES AND INJURIES INCIDENTAL TO GESTATION AND PARTURITION.

21.

22. Photograph of a case of Extra-Uterine Fœtation.

Vide *Brit. Med. Jour.*, 24th March, 1860.

Presented by F. Mitchell, Esq., of Shrewsbury.

DISEASES OF THE MAMMARY GLAND.

23.

TUMOURS AND ALLIED MORBID GROWTH.

24. Two drawings of a case of Pulsating Tumour of the Cranium, and two drawings of the microscopical appearances of the growth, with a portrait of the patient.

Vide Series V, No. 605.

Presented by Henry Morris, Esq.

MISCELLANEOUS.

25. Four drawings illustrating the anatomy of the Two-Headed Calf which is preserved in the Museum.

Presented by D. Hepburn, Esq.

SERIES XLIV.

PARASITES.

TÆNIADA.

SPECIMENS OF TÆNIA FROM THE HUMAN SUBJECT.

1. A Tænia Solium.

2. Another specimen of Tænia Solium.

3. Tænia Mediocanellata. The head and upper neck segments are wanting. At the upper part (to the right hand) a three-fold monstrous proglottis is displayed.

From a boy, 4 years of age.

Presented by Dr. Greenhow, F.R.S.

4. Four portions of Tapeworm (*Tænia media*). The specimen shows the character of the joints at different points at the strobile or so-called tapeworm colony. The central portion shows a double joint. The specimens have been steeped in ferrocyanide of potassium and chloride of iron.

Presented by Dr. Cobbold, F.R.S.

5. Three portions of a Tapeworm. The specimen in fragments together measured nearly seven feet. The head and neck segments are wanting. The total number of joints in all fragments was upwards of six hundred. Only the larger portions of the worm are here retained.

The specimen corresponds in some respects to the "ridged variety" of the common tapeworm described by Kuchenmeister as the tænia from the Cape of Good Hope (*Tænia capensis* of Moquin-Tandon); since described by Dr. Cobbold as a new species (*Tænia lophosoma*).

Presented by Dr. Spencer Cobbold, F.R.S.

SPECIMENS OF TÆNIA FROM ANIMALS.

6. A Tapeworm (*Diphyllobothrium stemmacephalum*). The specimen is nearly perfect, and measured originally six feet. The head is perfect, and supports two leaf-like sucking discs. It has been soaked in magenta.

From the intestines of a common porpoise.

Presented by Dr. Spencer Cobbold, F.R.S.

7. Two specimens of Tapeworm (*Tænia infundibuliformis*).

From the intestines of the red grouse (*Lagopus Scotius*).

Presented by A. Shaw, Esq.

8. A Tapeworm. Probably *Tænia expansa*.

9. Two examples of *Tænia serrata*. They were bred by the administration of *Cysticercus pisiformis*. The upper one is four days old, and deeply coloured by magenta. The lower one is twelve days old, and quite perfect.

Presented by Dr. Cobbold, F.R.S.

10. The Head and upper part of the Body of a large Tapeworm belonging to the genus *Tetrarhynchus*. The head has been laid open to expose the four lemniscus-like sheaths of the retracted proboscides.

Probably obtained from the intestines of a dog-fish.

11. The Serrated Tapeworm (*Tænia serrata*). This worm is derived from the *Cysticercus pisiformis*.

From a spaniel.

Presented by S. W. Sibley, Esq.

12. A Tænia Serrata, sexually mature. The specimen has been steeped in magenta.

From a bitch.

Presented by Dr. Cobbold, F.R.S.

13. The half of a sexually mature Tapeworm (*Tænia crassicollis*). The head is perfect.

From a cat.

Presented by S. W. Sibley, Esq.

14. A Tænia Crassicollis. It is the adult condition of the cysticercus from the mouse. The specimen has been steeped in carmine.

From a cat.

Presented by Dr. Cobbold, F.R.S.

15. Specimens of the Slender Tapeworm (*Tænia cucumerina*). Several of the heads are perfect, and may be seen at the lower part of the bottle.

From a dog.

16. Section of a Tapeworm (*Diphyllobothrium stemmacephalum*), showing the uterine rossettes and external longitudinal furrows.

From the common porpoise.

Presented by Dr. Cobbold, F.R.S.

17. A Tapeworm (*Bothriocephalus salmonis*).

From the intestines of a large salmon caught in Ireland.

Presented by Dr. Cobbold, F.R.S.

18. The Thorn-headed Worm (*Echinorhynchus inflexus*). It is attached to a portion of the intestine of Temminck's snapping turtle.

Presented by Dr. Cobbold, F.R.S.

CYSTICERCI.

CYSTICERCI FROM THE HUMAN SUBJECT.

19. Simple form of Acephalocyst or Hydatid. It has been stuffed with carded wool.

Removed by operation from the orbit.

Presented by J. W. Hulke, Esq., F.R.S.

20. Section of a large Hydatid Cyst. There were numerous echinococcus scolices in the interior. The inner wall of the cyst was tinged with bile.

From the liver of a young woman.
Reported in *Lancet* by Dr. Newman, 1st December, 1862.

21. Portion of a large Hydatid Cyst, which has been treated with magenta to show more distinctly the lamination of its walls. The upper portion is tinged with bile.

From the same case as the preceding specimen.

22. Echinococcus Cysts. The heads, hooks, &c., were very distinct and very abundant in some of the hydatids.

From the human liver.

23.

CYSTICERCI FROM ANIMALS.

24. Two small hydatids and one larger hydatid cyst, treated with magenta and tannic acid to show the different action of these agents on the outer and inner membranes. Both kinds displayed the characteristic echinococcus heads.

The two smaller ones are from a lemur, the larger one from the lungs of a sheep.

Presented by Dr. Cobbold, F.R.S.

25. A Cysticercus Fasciolaris. The head and caudal vesicle are perfect.

From the mesentery of a mouse.

Presented by Dr. Cobbold, F.R.S.

26. Four larval Tapeworms (*Cysticercus pisiformis*), removed from their cysts. The four cysts are displayed *in situ*, and distended by bristles. The larvæ are the scolices of *Tænia serrata*.

From the mesentery of a rabbit.

Presented by Dr. Cobbold, F.R.S.

27. Very young specimens of *Cysticercus pisiformis*. In this stage of migration the heads of these scolices are only imperfectly developed.

From the abdomen of a rabbit.

Presented by Dr. Cobbold, F.R.S.

28. Anterior half of a liver, stained in magenta. It shows the scars and empty places of cysts of the *Cysticercus pisiformis* after their migration and escape into the abdominal cavity.

From a rabbit.

Presented by Dr. Cobbold, F.R.S.

29.

30. Specimens of the common Round Worm, *Ascaris lumbricoides*.

From the human subject.

31. A female *Ascaris lumbricoides*. It is thirteen inches in length. The worm has been steeped in carmine solution, and laid open to show particularly the uterus, oviducts, and ovarian tubes. The alimentary canal is also drawn aside, leaving the perivisceral structures *in sitû*.

From the stomach of a woman, who died in 1862 after ovariotomy. There were four other male worms found with it. During life the patient had vomited three other ascarides.

32. A male *Ascaris lumbricoides*, from the same case as No. 31.

33. A female *Ascaris lumbricoides*. The intestinal tract is slightly coloured blue, and the reproductive organs yellow.

34. The Maw or Threadworm (*Oxyurus vermicularlis*). The lower group has been treated with magenta.

From a man.

Presented by Dr. Cobbold, F.R.S.

35. A Guinea Worm (*Filaria medinensis*, Gmelin). The head of the specimen is wanting, but the tail is perfect. It is a female, and the oviducal tubes contain young.

36. Portion of a female Guinea Worm (*Filaria medinensis*). The tail is entire. The specimen has been steeped in carmine.

37.

NÆMATODA FROM ANIMALS.

38. A female *Ascaris megalocephala*. The worm is laid open longitudinally, and the viscera turned aside to exhibit the alimentary canal, with the reproductive tubes coiled around it. The alimentary canal is injected blue, the uterus and vaginal ducts are coloured yellow, and the red lines indicate the position of the dorsal ventral vessels.

39. Three common Round Worms (*Ascaris mystax*). The central one is a female, the others males. The former has been treated with carmine, the latter with magenta. The spiculi or penes of the males are visible to the naked eye.

From a cat.

Presented by Dr. Cobbold, F.R.S.

40. Three specimens of *Sclerostoma armatum*. The upper one is a male, the other females. In the centre specimen the uterine and ovarian tubes have burst through the vaginal opening.

Presented by Dr. Cobbold, F.R.S.

41. A Hair-worm (*Gordius aquaticus*).

42.

TREMATODA.

FROM ANIMALS.

43. Three Flukes (*Fasciola hepatica*). The specimens have been treated with magenta.

From the liver of a sheep.

Presented by Dr. Cobbold, F.R.S.

FROM THE HUMAN SUBJECT.

44. A specimen of the Fluke (*Distoma crassum*). This was one of thirteen found in the duodenum of a Lascar. It is a rare worm.

Presented by Prof. Busk, F.R.S.

HARRISON AND SONS, PRINTERS IN ORDINARY TO HER MAJESTY, ST. MARTIN'S LANE.